

Building World-Class Scientific Journals Should Optimize the Editor-in-Chief Talent Cultivation Mechanism Post-Print

Authors: Ke Wen Hui

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Abstract

【目的】 The editor-in-chief serves as the helmsman of a scientific journal, guiding its development direction. This article explores the establishment of a robust and sustainable talent cultivation mechanism for editors-in-chief of scientific journals to advance the development of world-class scientific journals.

【方法】 By reviewing the competency requirements for editors-in-chief in building world-class scientific journals, this paper analyzes the current status and existing problems of the current editor-in-chief position regulations and cultivation mechanisms for scientific journals in China.

【结果】 Recommendations for optimizing the talent cultivation mechanism for editors-in-chief of scientific journals in China are proposed from five aspects: selection mechanism, performance appraisal, training system, award and recognition, and professional development.

【结论】 Cultivating and forming a micro-ecology for the professional development of editors-in-chief that can attract more outstanding talents provides strong support for building world-class scientific journals.

Full Text

Optimizing the Talent Cultivation Mechanism for Chief Editors is Essential for Building World-Class Scientific Journals

Institute of Agricultural Economics and Scientific-Technical Information, Fujian Academy of Agricultural Sciences, Fuzhou, Fujian 350003, China

Abstract

[Objective] Chief editors serve as the helmsmen of scientific journals, guiding their development direction. This article explores the establishment of a robust and sustainable talent cultivation mechanism for chief editors of scientific journals to advance the construction of world-class scientific journals. **[Methods]** By examining the capability requirements for chief editors of world-class scientific journals, this study analyzes the current status and existing problems in China's existing position regulations and cultivation mechanisms for chief editors. **[Results]** The paper proposes recommendations for optimizing China's talent cultivation mechanism for chief editors from five aspects: selection mechanisms, performance evaluation, training systems, awards and recognition, and professional development. **[Conclusion]** The formation of a professional development micro-ecology for chief editors that can attract more outstanding talents serves as a powerful support for building world-class scientific journals.

Keywords: world-class scientific journals; chief editor team; position regulations; cultivation mechanism

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Chief editors are the helmsmen who ensure that scientific journals remain true to their original mission, the practitioners of journal purpose and target positioning, and bear overall responsibility for journal quality [1-3]. On August 16, 2019, the "Opinions on Deepening Reform to Cultivate World-Class Scientific Journals" jointly issued by the China Association for Science and Technology, the Publicity Department of the Central Committee of the CPC, the Ministry of Education, and the Ministry of Science and Technology stated in Article 15, "Comprehensively Enhance the Capacity of Scientific Journals to Gather Global Innovative Ideas and First-Class Talents," proposing to "adopt various forms to strengthen editorial team building, create conditions to attract high-level international editorial board members and management talent, and enhance core competitiveness in publishing and dissemination" [4]. On May 30, 2016, at the National Conference on Science and Technology Innovation, the Academician Conference of the Chinese Academy of Sciences and Chinese Academy of Engineering, and the Ninth National Congress of the China Association for Science and Technology, General Secretary Xi Jinping pointed out that we must "discover talent in innovative practice, cultivate talent in innovative activities, and gather talent in innovative endeavors, to gather talents from all over the world and make them fully display their abilities" [5]. Currently, China does not lack excellent scientific manuscript sources. As of September 2020, China published 59,867 high-quality international papers, accounting for 31.4% of the world's total and ranking second globally; the number of China's highly cited papers reached 37,170, accounting for 23.0% of the world's total and also ranking sec-

and [6]. However, China lacks cultivators and planners for excellent scientific journals. To build world-class scientific journals, a large number of world-class journal chief editors are needed.

Domestic scholars discussing strategies for building China's first-class scientific journals have collectively pointed out the need to build a world-class scientific journal publishing team. Ren Shengli [7] explored enhancing the international competitiveness of Chinese academic journals in the context of cultivating world-class scientific journals, noting that the publishing team—including chief editors, editorial board members, and editors—is a key factor in building high-level scientific journals. Zhang Xin et al. [8] discussed opportunities, challenges, and countermeasures for cultivating world-class scientific journals, pointing out that China faces serious talent gaps in editors, editorial board members, and reviewers when building international scientific journals. Wu Xiaogeng et al. [9] explored scientific journal construction from a multi-dimensional perspective, noting that advancing the cultivation of top scientific journal talent is an important component of building world-class scientific journals. Lin Peng [10] reflected on and explored building world-class scientific journals, pointing out the need to strengthen strategic planning for journal publishing discipline editorial talent and establish sound talent cultivation, evaluation, and incentive mechanisms. These scholars all emphasized the important role of publishing talent in building world-class scientific journals. Meanwhile, Ding Jie et al. [11], Xi Xiangli et al. [12], and Xu Shurong et al. [13] focused on analyzing the responsibilities, positioning, and work content of scientific journal chief editors, but these studies did not conduct in-depth discussions on position regulations and cultivation mechanisms for chief editors. As the saying goes, “A train runs fast with a strong locomotive.” The industry generally believes that first-class scientific journals require first-class chief editor talent. Therefore, in discussing the construction of world-class scientific journals, the primary task is to establish a robust and sustainable talent cultivation mechanism for chief editors.

1. Capability Requirements for Chief Editors of World-Class Scientific Journals

China is accelerating its transition from a major scientific country to a scientific powerhouse, and high-level scientific research requires high-level scientific journals to publish its innovative achievements. Facing the tide of the times, Chinese scientific journals are in a special historical period. On September 11, 2020, General Secretary Xi Jinping further pointed out in his speech at the scientists' symposium: “We must run first-class academic journals and various academic platforms well, and strengthen domestic and international academic exchanges.” On June 25, 2021, the Publicity Department of the Central Committee of the CPC, the Ministry of Education, and the Ministry of Science and Technology jointly issued the “Opinions on Promoting the Prosperous Development of Academic Journals,” which represents the top-level design for the development of China's scientific journals and marks that cultivating and build-

ing world-class and high-quality scientific journals has risen to the national level. Since 2020, provincial-level world-class scientific journal construction plans have also been introduced successively. For example, in November 2020, the Publicity Department of the CPC Hunan Provincial Committee and the Department of Science and Technology of Hunan Province jointly issued the “Implementation Plan for Hunan Province’s Project to Cultivate World-Class Hunan-Edition Scientific Journals (Trial)” [14], marking that Hunan took the lead in launching scientific journal construction projects nationwide. In December 2020, the Shaanxi Provincial Association for Science and Technology, the Publicity Department of the CPC Shaanxi Provincial Committee, the Department of Education of Shaanxi Province, and others jointly issued the “Opinions on Promoting the Deepening Reform and High-Quality Development of Scientific Journals in Shaanxi Province” [15] and the “Implementation Plan for Shaanxi Province’s Sanqin Excellent Scientific Journals Development Plan (2021-2025)” [16], proposing scientific journal construction standards according to different categories of journals and formulating precise construction plans. The implementation and enforcement of relevant documents from central ministries and local governments will directly or indirectly improve the external environment for the development of Chinese scientific journals. These implementation projects that promote the top-level national design focus on each scientific journal, and the main responsibility lies with the chief editor.

As the soul engineer of scientific journals, chief editors should unhesitatingly shoulder the historical responsibility of journal revitalization and internationalization in building world-class scientific journals. The function of chief editors plays a key role in journal development. Therefore, building world-class scientific journals places higher and more specific requirements on chief editors, who should possess the following capabilities: (1) **Setting the direction.** General Secretary Xi Jinping’s important speeches have pointed out the direction for the development of scientific journals and are inspiring. The current macro external environment and top-level design for the development of Chinese scientific journals have basically taken shape, painting a grand blueprint for China’s future. Chief editors must adhere to the correct political orientation, follow the action plans and reform roadmaps for scientific journals formulated by the Party and the state, absorb the experience of international first-class peers, avoid losing direction due to “evaluation-only” approaches that deviate from the original mission of promoting scientific development, and remember General Secretary Xi Jinping’s entrustment to march toward world-class strong journals. (2) **Guarding quality and strengthening the journal.** Manuscript quality is the lifeline of scientific journals. Chief editors must “guard the quality gate and strive for discourse power,” closely follow social needs and industry pain points, publish groundbreaking original papers on major scientific discoveries or achievements, grasp the latest and most authoritative forward-looking research trends in the discipline, lead disciplinary research to the international frontier, and better serve national strategies. Simultaneously, they must comply with international review norms, conduct strict and fair peer review, eliminate “fa-

voritism manuscripts,” “interest manuscripts,” and “relationship manuscripts,” strictly guard the gate, publish more world-class scientific research achievements, and enhance credibility and recognition. (3) **Being the “lead goose.”** China’s first-class scientific journals are positioned for internationalization. Chief editors should earnestly learn from the publishing concepts and experiences of internationally renowned journals and become the “lead goose” of new development concepts. As the core and soul of the team, with high academic status and influence, strong networking abilities, and personal charisma, chief editors can lead and guide the editorial board and editorial department toward common goals. By leveraging the “lead goose effect” of chief editors, they can form a situation of ideological leadership, strategic thinking, development goals, and resource aggregation at the journal’s top-level design, making the editorial board, editorial department, and experts work in harmony and move forward together. (4) **Filling gaps.** Building a world-class scientific journal with Chinese characteristics is a new starting point and journey. Chief editors should sort out, identify, and lock onto development benchmarks among global first-class scientific journals, take benchmark journals as examples, and forge ahead bravely. In the competitive situation of “hundreds of boats racing” and “each trying to outdo the other,” they should strive to build world-class journals. Moreover, with the vigorous rise of emerging research fields, chief editors of Chinese scientific journals should actively aggregate global scientific research resources and create new benchmark journals in weak or blank research areas. (5) **Keeping pace with the times.** Building world-class scientific journals faces extremely severe competition and confronts rapidly changing scientific development and industry innovation. Chief editors must possess an international perspective that keeps pace with the times and the acuity to understand the latest trends in international publishing, deeply comprehend trends in scientific journal publishing, and promote the refinement, clustering, and globalization of scientific journals. Simultaneously, they must continuously explore and innovate new digital publishing models for scientific journals, digitally showcase China’s first-class scientific research achievements to the world, and achieve enhanced scientific discourse power to establish truly internationally influential scientific journals.

2. Current Position Regulations and Cultivation Mechanisms for Chief Editors of Chinese Scientific Journals

2.1 Relevant Regulations and Documents on Chief Editor Positions in China

To promote the long-term healthy prosperity and development of China’s scientific journals, central authorities and relevant departments have issued numerous regulations and documents. After the State Press and Publication Administration promulgated the “Regulations on Journal Publishing Management” in 2005, the “Interim Provisions on Journal Management” (1988) issued by the former State Press and Publication Administration was abolished. These regulations and documents made the following requirements for chief editor positions: (1)

Correct orientation. In 1995, the State Press and Publication Administration, the Publicity Department of the Central Committee of the CPC, the State Education Commission, and the Ministry of Personnel issued the “Interim Provisions on the Qualifications for Newspaper and Journal Society Presidents and Chief Editors (Chief Editors),” requiring that chief editors “should have relatively high Marxist theoretical cultivation and policy level” and “should adhere to the theory of building socialism with Chinese characteristics and the Party’s basic line.” In 1998, the General Office of the Ministry of Education issued the “Management Measures for University Journals,” requiring that chief editors have “relatively high Marxist theoretical level and strong political responsibility.” (2) **Certified employment.** In 1995, the State Press and Publication Administration issued the “Interim Provisions on the Qualifications for Newspaper and Journal Society Presidents and Chief Editors (Chief Editors),” requiring that starting from 1997, journal chief editors should first undergo training and obtain the corresponding “Post Training Qualification Certificate” before taking up their positions. (3) **Final publication review.** In 2001, the State Press and Publication Administration issued the “Notice on Strictly Implementing the Journal ‘Three-Review System’ and ‘Three-Proofreading and One-Reading’ System to Ensure Publication Quality,” requiring that journal publishing must conscientiously implement the final review system by the chief editor. (4) **Qualification restrictions.** In 1991, the Ministry of Science and Technology issued the “Management Measures for Scientific and Technical Journals,” requiring that full-time chief editors or deputy chief editors should employ personnel with senior technical titles. The 1995 “Interim Provisions on the Qualifications for Newspaper and Journal Society Presidents and Chief Editors (Chief Editors)” required that chief editors must be in-staff personnel of the supervising and sponsoring units. Additionally, the 1998 “Management Measures for University Journals,” the 2008 “Regulations on the Management of Professional Qualifications for Publishing Professionals,” the 2009 “Notice on Standardizing the Qualifications of Principal Persons in Charge of Newspapers and Journals,” and the 2011 “Several Provisions on Strengthening the Management of Securities and Futures Information Dissemination in Newspapers and Journals” all made corresponding requirements for chief editor qualifications. These documents played a positive role in the development of China’s scientific journals during specific periods, but some documents were issued relatively early. Although some supplementary revisions have been made, the content concerning chief editor positions has not been significantly adjusted. To better respond to new development situations, documents or regulations adapted to position development should be issued in a timely manner.

2.2 Selection Methods for Chief Editors of Chinese Scientific Journals

China currently has no relevant regulations or documents on the selection of scientific journal chief editors. Only Article 8 of the “Management Measures for University Journals” issued by the General Office of the Ministry of Education in 1998 requires that “the editorial department of a journal implements

a chief editor responsibility system, and the chief editor is appointed by the university (institute) president.” As of the end of 2019, China’ s total number of scientific journals was 4,958, with sponsors mainly including research institutes, higher education institutions, academic societies (associations, etc.), and publishing houses (companies). The first three types of sponsors are the main force of scientific journals. The nature of the sponsoring units and the current institutional mechanisms have determined that there are currently four main selection methods for chief editors of Chinese scientific journals: (1) **Unit appointment.** The chief editor is appointed by the sponsoring unit, generally an administrative leader of the sponsoring unit or a famous academic figure who holds a concurrent or nominal position. This is currently the most common selection method for Chinese scientific journals, mostly seen in journals sponsored by research institutes, higher education institutions, and various societies (associations, etc.). (2) **Recommendation by predecessor.** The chief editor is recommended by the previous chief editor from among deputy chief editors or editorial board members, considering their academic influence, grasp of the journal’ s style, and whether they truly care about the journal’ s development. After selection, the editorial department sends a formal invitation and appoints them upon agreement. (3) **Targeted selection.** The sponsoring unit forms a selection committee, establishes specific criteria, and solicits applicants. The selection committee reviews and screens applicants according to the criteria before making a final decision. This method is mostly seen in journals sponsored by publishing houses (companies) and some newly founded, high-starting-point scientific journals. (4) **Internal recruitment.** Based on the journal’ s positioning and development direction, the sponsoring unit publicly recruits scholars within the unit who have suitable academic backgrounds, high academic reputations, and are willing to dedicate themselves to serving as chief editors. This form is commonly seen in scientific journals sponsored by research institutes and higher education institutions.

2.3 Existing Training Programs and Seminars for Chief Editors of Chinese Scientific Journals

According to national press and publication policies, regulations, and international scientific journal development trends, and to improve the political quality, work ability, and professional knowledge necessary for chief editors to fulfill their duties, the main types of chief editor training currently conducted in China include: (1) **Training organized by national industry authorities.** According to the requirements of the “Regulations on Conducting Post Training and Implementing the Certified Employment System in the Publishing Industry” and the “Implementation Measures for Certified Employment in Publishing Industry Leadership Positions,” the State Press and Publication Administration annually organizes national training classes for chief editors of important scientific journals and training classes for chief editors of scientific journals in central units in Beijing. (2) **Training organized by national associations and supervising units.** For example, training classes for chief editors of scientific journals

under the Chinese Academy of Sciences, training classes for chief editors of scientific journals under the China Association for Science and Technology, and training classes for chief editors of journals in the Chinese Medical Association series. (3) **Training organized by provincial associations and supervising departments.** For example, with approval from the Training Center of the State Administration of Press, Publication, Radio, Film and Television, the Guangdong Provincial Periodical Association organized the “2019 Guangdong Periodical Presidents and Chief Editors Training Class.” In 2019, the Publicity Department of the CPC Jiangsu Provincial Committee organized a provincial chief editor post training class. These trainings have enhanced chief editors’ awareness of innovative publishing, updated their knowledge structure, and improved their ability to solve new problems. In terms of building platforms for chief editor discussions, the China Association for Science and Technology has continuously held salons for chief editors (presidents) of scientific journals, organizing outstanding chief editors of domestic scientific journals and heads of journal societies or journal clusters (groups) to conduct free inquiry-style discussions and exchanges on hot topics and focal issues of common concern to scientific journals, with themes such as “Strategies and Tactics for Building World-Class Agricultural Science and Technology Journals,” “Advancing from Excellence to World-Class Scientific Journals: Promotion and Practice,” and “Exploration of Integrated Innovation in Popular Science Journals,” to encourage innovation and build consensus. At the provincial level and within relevant industries, various forms of chief editor discussion and exchange meetings have also been held. For example, in 2019, the 2019 Chief Editor Seminar on Scientific Journal Evaluation and Integrated Development, hosted by the Liaoning Provincial Periodical Association and the *Chinese Journal of Tissue Engineering Research* Magazine and undertaken by the *Neural Regeneration Research (English Edition)* Magazine and the Liaoning Provincial Society of Cell Biology, discussed concepts of integrating industry, academia, and research in scientific journals and promoted new models of digital services for scientific journals, aiming to improve the academic quality of scientific journals in Liaoning Province. These discussions have all focused on the future development of scientific journals, grasped the development opportunities for Chinese scientific journals, and provided beneficial references for building world-class scientific journals.

2.4 Talent Cultivation Programs and Awards for Chief Editors of Chinese Scientific Journals

China currently has no talent cultivation programs specifically for chief editors, but projects related to publishing talent cultivation have received increasing attention from relevant departments at all levels. For example, to implement the “Opinions on Deeply Implementing the ‘Chinese Academy of Sciences Talent Cultivation and Introduction System Project,’ ” and to further enhance the innovation ability and international competitiveness of the Chinese Academy of Sciences’ journal publishing field (including science popularization), in 2016, the Science Communication Bureau of the Chinese Academy of Sciences issued

the “Management Measures for the Chinese Academy of Sciences’ Program for Introducing Outstanding Talents in the Journal Publishing Field,” making the “Program for Introducing Outstanding Talents in the Journal Publishing Field” one of the Academy’s talent special projects and “adhering to overall planning and considering all factors to comprehensively introduce all types of talents needed for the leapfrog development of the journal publishing field.” In 2020, the “China Science and Technology Journal Excellence Action Plan” established the “Sub-project for Selecting and Cultivating High-Level Publishing Talents,” which includes a “Young Talent Support Project” and a “Talent Cultivation Activity Project” to accelerate the construction of a high-level publishing talent team and consolidate the foundation for the development of China’s scientific journal industry. The highest government honors for scientific journal chief editors are the “China Publishing Government Award—Outstanding Individual Award” and the “National Leading Talent in Press and Publication Industry.” However, as scientific journals are a small category within the publishing field, their chances of competing for these awards are extremely slim. In addition, there are no corresponding talent evaluation awards for scientific journal chief editors at either the national or provincial government levels within the scope of science and technology plans. In June 2021, the China Association for Science and Technology’s “Notice on Collecting Outstanding Cases of Editors and Reviewers for the China Science and Technology Journal Excellence Action Plan” included chief or deputy chief editors in the selection of outstanding editors but did not establish separate awards for chief editors. Some awards are offered by national and provincial societies. For example, the China Editology Society for Science and Technology Journals conducts “Golden Bull Award” and “Silver Bull Award” selections to honor outstanding workers who have been engaged in editing and publishing scientific journals for a long time, with many chief editors among the candidates. The Society of China University Journals conducts the “Outstanding Chief Editor of Chinese University Science and Technology Journals” selection. However, because these awards are selections by non-governmental organizations, they are not highly recognized in the assessment and evaluation of various units.

3. Problems in Current Position Regulations and Cultivation Mechanisms for Chief Editors

3.1 Innovation Needed in Chief Editor Selection Methods and Mechanisms

Building world-class scientific journals requires support from specific systems. The selection of chief editors still faces problems such as institutional absence and lack of regulations at many units, institutions, and even the national level. The impetus to innovate chief editor selection methods is insufficient, and research on selection system construction needs to be strengthened to lead scientific journal development with forward-looking institutional design. Some journal chief editors are selected through targeted selection, but the procedures,

mechanisms, methods, and approaches vary widely, with insufficiently detailed processes and a lack of corresponding industry norms and standards, naturally resulting in different outcomes.

3.2 Lack of Binding and Incentive Mechanisms in Performance Evaluation

Currently, most chief editors of Chinese scientific journals are concurrently held by well-known experts or unit administrative leaders, lacking incentive mechanisms. Journal work can only rely on chief editors' dedication, and with changes in chief editors, journals often experience "alternating hot and cold" phenomena, with insufficient initiative and continuity in development. The lack of binding mechanisms and corresponding supervision measures leads to insufficient enthusiasm and self-discipline in many chief editors' work, making it easy for "favoritism manuscripts," "interest manuscripts," and "relationship manuscripts" to appear. Therefore, it is necessary to explore the establishment of binding and incentive mechanisms for chief editor performance evaluation.

3.3 Long-Term Dynamic Training Mechanisms Need Further Improvement

Most scientific journal chief editors participate in the chief editor training class organized by the State Press and Publication Administration once every five years, mainly to obtain the "Post Training Qualification Certificate" to successfully pass the annual journal inspection. Due to limited quotas, the State Press and Publication Administration also requires that journal chief editors can only attend training once every five years. In addition, chief editor training programs organized by provincial supervising departments or industry associations lack planning, are relatively scattered, and occur intermittently, with training content pieced together without forming a systematic training system. Such training is clearly insufficient to meet the industry needs of building world-class scientific journals, requiring further improvement of mechanisms from the national to local levels to establish long-term, dynamic chief editor training systems.

3.4 Urgent Need to Establish a Chief Editor Talent Award and Recognition System

China's scientific journal chief editors already constitute a considerable number. Chief editor talent should be incorporated into the national science and technology talent construction system, and a set of award and recognition systems for chief editors should be established so that their work receives due social recognition and respect from peer researchers. Only with the establishment of corresponding talent award and recognition systems will more passionate and capable people join the competition for chief editor positions and jointly promote the construction of world-class scientific journals.

3.5 Need to Advance Exploration of the Professionalization Path for Chief Editors

The phenomenon of concurrent chief editorship is widespread in China's scientific journals. While there are outstanding examples among these concurrent chief editors, the number is very limited. Expert-type chief editors devote their main energy to scientific research or teaching, while administrative-type chief editors devote their main energy to daily administrative affairs, naturally placing chief editor responsibilities in second place. Some chief editors hold "multiple concurrent positions" and have no intention of fulfilling the responsibilities and obligations of chief editors, with no clear planning, firm direction, or long-term goals for journal development. Some are completely in a state of laissez-faire. Although the phenomenon of "academicians leading journals" has injected a "shot in the arm" into the development of China's scientific journals and has "benchmark" value, it is not universally applicable. It is clear that building world-class scientific journals cannot rely solely on concurrent chief editors. We must actively promote the exploration of the professional development path for chief editors, enabling chief editors to perform their functions, so that scientific journals can achieve leapfrog progress.

4. Recommendations for Optimizing the Talent Cultivation Mechanism for Chief Editors

4.1 Promote Innovation in Chief Editor Selection Methods and Mechanisms Through Discussion and Practice

To achieve "latecomer advantages" in China's scientific journal construction and independently innovate a path for scientific journal development, we must explore breakthroughs in systems and mechanisms. Substantive innovation and practice in chief editor selection methods and mechanisms are core elements for building a world-class scientific journal chief editor talent team. Article 8 of the "Interim Provisions on the Qualifications for Newspaper and Journal Society Presidents and Chief Editors (Chief Editors)" issued by the State Press and Publication Administration in 1995 states that "Newspaper and journal society presidents and chief editors (chief editors) must be citizens of the People's Republic of China and must be in-staff personnel of the supervising and sponsoring units." This provision restricts the selection of China's scientific journal chief editors to a very small scope, resulting in the widespread practice of appointing chief editors through unit appointment, with the legal person serving as chief editor or a qualified expert from the unit serving as chief editor. In terms of system design, can we explore allowing the employment of other nationally renowned experts or academicians outside of "in-staff personnel of the supervising and sponsoring units" as chief editors? We could also first select some journals as pilots to conduct beneficial discussions and practices, provided that candidates pass political, ideological, and academic examinations.

Under the existing system, we encourage supervising and sponsoring units (es-

pecially when founding new journals) to adopt more innovative forms of chief editor selection beyond unit appointment, such as further selection based on targeted selection, internal recruitment, or predecessor recommendation. Drawing on chief editor selection procedures from foreign publishers, we can further optimize chief editor selection mechanisms: on the basis of publicly soliciting applications by the sponsoring unit, recommendation by the previous chief editor, or self-nomination by experts, establish a 3-5 person qualification review committee to review the application materials of recommended or self-nominated candidates, and then form a 5-7 person chief editor selection committee to screen applicants and finalize the selection with public announcement of results. In the chief editor selection process, we must avoid being overambitious and focusing solely on status and titles, instead selecting talents who truly care about the publication and are willing to dedicate themselves to its development. Institutionally, we should set terms for each chief editor, transition periods between outgoing and incoming chief editors, and requirements for chief editor performance indicators, encourage exploration of the multi-chief-editor model used internationally, and employ domestic and foreign experts to jointly serve as journal chief editors to promote further improvement in the international influence of China's scientific journals and their integration into the global community.

4.2 Strengthen Chief Editor Performance Evaluation and Establish Binding and Incentive Mechanisms

Chief editors are the helmsmen of scientific journals, determining their development direction and publication quality. However, China currently lacks performance evaluation for scientific journal chief editors and has not yet established binding and incentive mechanisms. Under the long-term “small workshop” publishing model, some chief editors have developed a “boiling frog in warm water” attitude toward publishing, with a mentality of seeking no merit but avoiding blame, lacking the courage and boldness to actively face the construction of world-class brands. With insufficient incentives and lax constraints, the enthusiasm, initiative, and creativity of chief editors have not been fully realized. Further promoting the establishment of a performance evaluation system for scientific journal chief editors to achieve scientific and effective binding and incentive mechanisms can comprehensively stimulate chief editors' motivation. Main measures include: (1) **Internal assessment.** Supervising and sponsoring units should establish a performance evaluation system adapted to scientific journal development, strengthen goal orientation, regularly evaluate journal development, and assess chief editors' contributions to journals, rewarding achievements and punishing failures, implementing a matching salary system, and considering replacing chief editors who fail to meet journal development expectations. (2) **Specialized assessment.** Provincial publishing units should regularly conduct specialized assessments of chief editors' business performance or hold scientific journal “evaluation meetings” and “reading meetings,” hiring relevant experts to review publication positioning, editorial ideas, column settings, and design forms, identify problems and deficiencies, propose corresponding rectification

and improvement measures for journals, and submit them to supervising and sponsoring units for supervision and implementation, requiring supervising and sponsoring units to take corresponding action against chief editors who refuse to rectify. (3) **Annual inspection assessment.** The State Press and Publication Administration conducts annual journal verification, which currently only examines whether the principal persons in charge of journals have obtained the “Post Training Qualification Certificate” from the State Press and Publication Administration. We should increase the assessment of chief editors to avoid “collective responsibility” situations and make corresponding binding and incentives more effective and operational.

4.3 Improve the Chief Editor Training System and Build a Long-Term Dynamic Training Mechanism

To meet the needs of building world-class scientific journals and to publish and disseminate more first-class scientific research achievements, we should construct a scientific, long-term, and dynamic knowledge training system for scientific journal chief editors, explore and establish supporting training mechanisms, and rely on high-quality chief editor team training to form strong support for the transformation and leapfrog development of scientific journals, laying a solid foundation for “going global and facing the world.” To build a systematic chief editor training system: (1) **Multi-level three-dimensional training.** Construct a multi-level three-dimensional training network with chief editor training classes organized by the State Press and Publication Administration and national scientific journal associations as the main trunk, chief editor training classes organized by provincial press and publication bureaus as branches, and provincial scientific journal associations and scientific journal editology societies as leaves. Accelerate the development of international chief editor training classes to form a new development pattern with domestic training as the main body and domestic and international training promoting each other. (2) **Categorized key training.** According to the different functional positioning of basic frontier, engineering technology, and science popularization journals, conduct chief editor training for different types of scientific journals, highlight development priorities, effectively integrate various resources, and promote chief editor training for different types of scientific journals in a categorized manner. (3) **Discipline-specific precision training.** Encourage various disciplines to rely on societies to conduct precision discipline training, break new ground according to their respective disciplinary characteristics from new concepts, new content, and new paths, tailor curriculum systems, build curriculum resource libraries, select excellent training teachers, and form a targeted systematic training program. (4) **Cross-regional joint training.** Encourage the establishment of regional scientific journal development alliances, continuously conduct cross-regional exchanges and complementary advantages, carry out chief editor post training, and enhance chief editors’ vision and understanding around some issues and hot topics faced by scientific journals. (5) **Cluster-based thematic training.** Through forms such as single-journal differentiation, sub-journal derivation, and series

publishing, make China's scientific journals bigger and stronger. Encourage publishing houses or magazine societies to conduct chief editor thematic training in an intensive manner, forming a normalized mechanism within clusters. Simultaneously, encourage the holding of various forms of international training classes or seminars for scientific journals, such as the "Zhongke Journal Chief Editor International Publishing Business Training Class" jointly organized by the Science Press Journal Publishing Center and the Chinese Academy of Sciences International Academic Exchange Center. Through international peer training, broaden chief editors' horizons, understand international advanced publishing concepts and scientific and technological means, identify gaps with international first-class publishers, and better clarify future directions for effort.

4.4 Promote the Institutionalization, Standardization, and Scientification of Chief Editor Talent Awards and Recognition

To reform the evaluation mechanism and highlight the important strategic position of talent work in the overall situation, we must coordinate various tasks in the talent evaluation system. In 2016, the "Opinions on Deepening the Reform of the Talent Development System and Mechanism" issued by the Central Committee of the CPC pointed out that we must "improve talent evaluation and assessment methods, give play to the role of multiple evaluation subjects such as government, market, professional organizations, and employers, and accelerate the establishment of a scientific, socialized, and market-oriented talent evaluation system." Article 15 of the 2019 "Opinions on Deepening Reform to Cultivate World-Class Scientific Journals" [4] proposed to "comprehensively enhance the capacity of scientific journals to gather global innovative ideas and first-class talents." Therefore, to set examples, recognize advanced individuals, and enhance the attractiveness of chief editor positions, we must promote the institutionalization, standardization, and scientification of chief editor talent awards and recognition by: (1) **At the national level**, recommending that the State Press and Publication Administration appropriately increase the number of selection quotas for scientific journal chief editors in the "China Publishing Government Award" and "National Leading Talent in Press and Publication Industry" or establish special items for scientific journals. (2) **At the provincial level**, promoting provincial press and publication bureaus to establish awards corresponding to the "China Publishing Government Award" and "National Leading Talent in Press and Publication Industry," and simultaneously include them in various provincial science and technology department talent plan projects to enhance the recognition of chief editor talent. (3) **At the association and society level**, encouraging and supporting national and provincial associations and societies to conduct various forms of outstanding chief editor selection activities to enhance chief editors' sense of responsibility and honor, strengthen incentive and demonstration effects, and better gather strength to promote journals toward internationalization. (4) **At the unit level**. Various units should strengthen recognition of chief editor talent, have corresponding evaluation and promotion mechanisms, prohibit artificial caps on chief editor professional ti-

ties, and avoid affecting the enthusiasm and creativity of chief editors in their positions.

4.5 Explore Mechanism Innovation to Write a New Path for Chief Editor Professional Development

For scientific journals to stand firm in the tide of internationalization and integrate into the global community, exploring the path of chief editor professionalization is imperative. The widespread phenomenon of concurrent chief editorship is closely related to chief editor promotion mechanisms, award and evaluation mechanisms, and funding shortages. To build world-class scientific journals, chief editors must care about scientific research while paying attention to journals, holding two, three, or even four concurrent positions. This work state is not conducive to journal development. While some journals can still be run successfully, for the vast majority of scientific journals, concurrent chief editorship makes it difficult to grasp changes, characteristics, and trends in academic trends, and difficult to think about how to better develop their own style and characteristics, inevitably weakening chief editor responsibilities. To achieve the “dream of a strong scientific journal nation,” we cannot place chief editor work responsibilities in second place. We must explore mechanisms for chief editor professionalization: (1) **Conduct pilot work on chief editor team professionalization.** Professionalization construction should adopt a pilot-first, step-by-step approach. Take the lead in conducting trial professionalization operations in cluster pilot units of the China Science and Technology Journal Excellence Action Plan, strengthen empirical research on professionalization construction, summarize experiences and models, explore innovations, and gradually promote them to achieve comprehensive development. (2) **Issue professionalization system standards for chief editor positions.** While formulating medium- and long-term professionalization development strategic plans and talent development plans for chief editors, accelerate the establishment of five major systems for professionalization construction, including a professional standard system, discipline textbook system, education and training system, evaluation and certification system, and professional supervision and expansion system. (3) **Broaden the career development space for chief editors.** The task of building world-class scientific journals is formidable. We must ensure that chief editors have enormous development space both horizontally and vertically. How to effectively utilize and manage existing resources and cultivate and form a professional development micro-ecology that can attract more outstanding talents is a question that must be considered for a long time to come.

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Author Biography: Ke Wenhui (1985-), male, from Quanzhou, Fujian, associate senior editor, council member of Fujian Provincial Periodical Association, executive deputy chief editor and editorial department director of *Fujian Agricultural Science and Technology*, research direction: scientific journal publishing work.

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