

## Clustering to Optimize and Upgrade University Journal Centers: A Case Study of the Journal Center of Chongqing University of Technology (Postprint)

**Authors:** Xu Jiayi, Peng Xi, Yang Meimei, He Liu

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### Abstract

**Objective:** In response to the current situation of China's sci-tech journals being small, weak, and dispersed, and based on the characteristics of the academic journal clustering model, this study summarizes the practical experience of cluster-based operation of university journal presses to provide reference for journal publication.

**Method:** Taking the Journal Press of Chongqing University of Technology as an example, this paper introduces how the press constructs a journal cluster through optimizing publishing resource allocation, cultivating common institutional culture, enhancing learning and innovation capabilities, institutional and mechanism innovation, and expanding brand influence.

**Results:** The cluster-based construction has achieved preliminary success, realizing leapfrog development of the journals—characterized by continuously increasing resources, an expanding team, improving quality, continuous institutional innovation, and improving office environment.

**Conclusion:** Cluster-based journal operation contributes to the optimization and upgrading of university journal presses, enhances core competitiveness, and improves the sustainable development capability of journals.

## Full Text

# Clustering as a Catalyst for Optimization and Upgrading of University Journal Publishers: A Case Study of Chongqing University of Technology Journal Publisher

### Abstract:

**Objective:** In response to the current situation of Chinese scientific and technological journals being small, weak, and dispersed, this study summarizes the practical experience of cluster-based operation in university journal publishers based on the characteristics of academic journal clustering models, providing a reference for journal management. **Methods:** Using Chongqing University of Technology Journal Publisher as a case study, this paper introduces how the publisher constructs its journal cluster by optimizing publishing resource allocation, cultivating shared institutional culture, enhancing learning and innovation capabilities, innovating systems and mechanisms, and expanding brand influence. **Results:** The cluster construction has achieved initial success, realizing leapfrog development of journals—increasing resources, expanding teams, elevating quality, innovating systems, and improving office environments. **Conclusion:** Cluster-based journal operation helps university journal publishers optimize and upgrade, enhance core competitiveness, and improve sustainable development capacity.

**Keywords:** clustering; journal operation practice; academic journals; university journal publishers; Chongqing University of Technology Journal Publisher

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China's scientific and technological journals are numerous. According to the *Blue Book on the Development of China's Science and Technology Journals (2018)*, by the end of 2017, the number of Chinese scientific and technological journals had reached 5,052 [1]. However, despite this quantitative scale, there remain few large, strong, or prestigious journals. Most Chinese scientific and technological journals operate as single-title publications, characterized by small scale, weak capacity, and dispersed distribution [2,3]. Meanwhile, mature international publishing groups with established conglomerate business models have entered China, causing a significant outflow of excellent papers and creating substantial competitive pressure on China's publishing industry. Domestic scientific and technological journals urgently require fundamental changes in management philosophy and operational models [4] to overcome their developmental limitations and enhance core competitiveness.

In this context, peers in China's scientific and technological journal community have identified clustering as a critical issue affecting the growth and strengthening of Chinese journals [5]. Since its establishment in 2006, Chongqing University of Technology Journal Publisher has been actively exploring the path of cluster-based development for scientific and technological journals. This paper summarizes recent reforms and practical experiences to examine cluster-based

operational models for university journal publishers.

### **1.1 Discipline-Based Cluster Model**

Leveraging internet advantages, this model brings together journals with similar or adjacent research content through a unified online platform. Through resource sharing, these journals form a specialized journal cluster that generates scale effects [6], though the journals may belong to different supervising or sponsoring organizations. A typical example is the Chinese Optics Journal Website of the Shanghai Institute of Optics and Fine Mechanics, which includes over 50 optics journals [7], covering nearly all domestic optics journal resources and establishing itself as an authoritative domestic platform for optics information dissemination.

### **1.2 Professional Society or Association Cluster Model**

Academic societies and associations are non-profit academic organizations based on related research fields, possessing abundant academic resources that provide strong support for journal development. Academic journals published by society- or association-based institutions have long played a leading role in content quality [8]. A representative example is the series of journals published by the Chinese Medical Association. The association has fully leveraged its leading role to create the “Chinese Brand” medical journal cluster, which has continuously developed according to the establishment of various specialized branches under the association, gradually forming a journal cluster that reflects China’s medical research levels across various disciplines [9].

### **1.3 Journal Publisher or Corporate Operation Cluster Model**

Under this model, a single journal publisher or company uniformly operates multiple journals, representing a more advanced approach in terms of market orientation and corporate attributes compared to the professional society model [10]. Within the publishing organization, specialized division of labor enables unified management of editorial and publishing processes, integration of expert, editorial, and author resources, ultimately achieving improved article quality, reduced operational costs, enhanced work efficiency, expanded journal distribution, and improved service levels. A typical example is Beijing Zhongzhong Publishing Co., Ltd., which, through its journal cluster strategy, operates multiple journal groups with annual revenues exceeding 200 million yuan, achieving large-scale publishing, intensive management, and group-based administration [11].

### **1.4 Content Aggregator Cluster Model**

This model relies on a unified internet information service platform or digital publishing platform to assemble large-scale, multi-disciplinary journals [12]. Representative examples include CNKI, Wanfang Data, and Chongqing VIP.

These platforms encompass vast academic resources including numerous academic papers, enabling users to easily retrieve target literature. However, they remain separated from the editorial and publishing processes of scientific and technological journals, making it difficult to control content quality or optimize publishing resources [13].

## 2. Clustering Construction Practices of Chongqing University of Technology Journal Publisher

Over the years, Chongqing University of Technology Journal Publisher has abandoned traditional conservative publishing mindsets, kept pace with international publishing trends, consistently prioritized social benefits, and committed to cluster-based construction of academic journals, achieving leapfrog development: the number of published journals has grown from 1 at its founding to 6 today; staff has increased from 5 to 19; office space has expanded from 1 room to 17 rooms; multiple journals have advanced from general status to Science and Technology Core, Humanities and Social Sciences Core, and Chinese Core Journal status. In 2014, the publisher registered Chongqing University of Technology Journal Publisher Co., Ltd., establishing a new dual-track operation model. These achievements demonstrate initial success in cluster construction.

### 2.1 Optimizing Publishing Resource Allocation

To further leverage cluster advantages, effectively manage editorial and publishing workflows, and improve resource utilization efficiency, the publisher established five departments: Journal Department, General Management Department, Quality Assessment Department, New Media Department, and Development Department. The Journal Department comprises editorial offices for all six journals, each responsible for its journal's editorial quality, column planning, and manuscript organization. The General Management Department handles unified administration, human resources, and financial management for the entire publisher. The Quality Assessment Department conducts regular reviews of editorial quality for each journal, performing quality evaluations to stabilize and improve publication standards. The New Media Department manages promotional activities through WeChat, Weibo, and other self-media platforms, planning relevant online and offline events. The Development Department oversees marketing and promotion efforts. This detailed division of labor clarifies responsibilities and rationalizes work distribution, improving employee proficiency and enabling knowledge accumulation and skill development in specialized roles while reducing training and adaptation costs. By sharing publishing resources and optimizing allocation, the publisher effectively reduces labor and production costs, thereby enhancing market competitiveness.

## 2.2 Cultivating Shared Institutional Culture

Shared cultural traditions, behavioral norms, and values facilitate the formation of mutual trust relationships within the cluster, promoting inter-departmental communication, coordination, and deepening labor division [14]. Chongqing University of Technology Journal Publisher has consistently emphasized team culture, ideological, and work style development, requiring continuous efforts in four aspects: pioneering spirit, collaborative attitude, enterprising courage, and journal management wisdom. Training constitutes a key team-building activity: the Quality Assessment Department develops individualized training plans every six months to enhance employee capabilities, encouraging editors to participate in various conferences, forums, training sessions, and salon activities at different levels, and to actively present and speak. Monthly work summary meetings are held regularly to help employees reflect on recent work. To foster employee belonging and honor, the publisher encourages editors to engage in research and publish academic articles, with corresponding reward policies. It also supports employees in pursuing further education, advanced degrees, and professional titles, linking compensation to educational qualifications and professional rank to further improve overall employee quality. In terms of organizational culture, considering the sedentary nature of editorial work, the entire staff performs collective calisthenics in the corridor at 10 a.m. daily. At year-end, employees represent the publisher in cultural performances at annual meetings of the Chongqing University Journal Research Association and Chongqing Science and Technology Journal Editors Association.

## 2.3 Enhancing Learning and Innovation Capabilities

Industrial clusters facilitate the diffusion and application of new ideas within journal clusters. To adapt to industry reform and development, transform management concepts and operational models, drive innovation, and improve core competitiveness, the publisher has established a comprehensive business learning and exchange system. Through training and exchanges, it leverages talent development to build a learning-oriented editorial team. The publisher has consistently focused on cultivating editors as versatile talents: an excellent editor must not only complete editing and proofreading tasks but also possess strong learning capabilities, advanced management concepts, and skills in engaging with experts. Therefore, the publisher invites numerous industry experts annually for lectures and exchanges, and holds regular semiannual and annual meetings where editors summarize recent work, share experiences, raise issues, and discuss solutions. Only through continuous learning can editors stay informed about industry trends, update publishing concepts, strengthen learning and innovation capabilities, enhance the cluster's sustained innovation capacity, and meet the publisher's development needs.

To broaden perspectives and learn from peers' strengths and experiences, the publisher has consistently practiced "open-door publishing," adhering to the principle of "going out" and "bringing in" with an open and inclusive mindset

that encourages continuous learning. Since 2011, the publisher has hosted 77 visits from domestic and international experts and relevant institutions, and conducted 86 visits to relevant organizations and experts. Each visit and reception requires meeting minutes, with responsible parties sharing content with the entire organization for collective learning. This extensive communication and mutual learning has enhanced editors' learning and innovation capabilities, demonstrating the advantages of cluster-based publishing.

## 2.4 Institutional and Mechanism Innovation

To strengthen management system construction, provide an environmental foundation conducive to cluster development, and optimize cluster structure, the publisher has formulated 49 management measures and regulations covering departmental and position responsibilities, financial management, human resources management, administrative management, asset management, and “three major and one large” decision-making systems, enabling inter-departmental collaboration and clear position-specific responsibilities.

Based on annual target responsibility agreements signed by each department, monthly work assessment quantitative indicators are established, with the Quality Assessment Department scoring performance according to monthly completion status. Assessment scores are linked to employee salaries, awards, and promotions.

Employee quarterly performance bonuses and year-end bonuses are tied to company profits to maximize motivation and creativity. The publisher has established 49 award categories, 7 types of allowances, and recognition programs including “Monthly Journal Star,” “Annual Advanced Worker,” and “Annual Outstanding Contributor.” Individual development is integrated with organizational development, creating a smooth career advancement platform. Employees are encouraged to pursue professional titles and advanced degrees; for position promotions, clear advancement channels are provided, allowing employees to progress from level three to level two, and from level two to level one upon meeting requirements.

## 2.5 Expanding Brand Influence

Journal brand represents intangible assets and a winning formula for scientific and technological journals [15]. Market-oriented operation is an effective means to expand brand influence. In recent years, to address insufficient influence, the publisher has formulated a series of development strategies: (1) **Collaborating with societies**: Through co-sponsorship, serving as column editors, and hosting academic conferences, the publisher has established close partnerships with numerous domestic and international societies including the Japanese Society for Artificial Intelligence, Korean East Asian Humanities Society, Chinese Association for Artificial Intelligence, Chinese Society of Theoretical and Applied Mechanics, Chinese Society of Automotive Engineers, Chinese Asso-

ciation of Logic, and Chongqing Ordnance Society, leveraging their abundant academic and expert resources to boost journal development. (2) **International co-publishing**: Collaborating with the UK Institution of Engineering and Technology to publish the English journal *CAAI Transactions on Intelligence Technology*, and with Switzerland's Inderscience Publishing Group to launch *International Journal of Hydromechatronics*, learning advanced overseas publishing concepts and utilizing international publishers' platforms and promotional channels to enhance journals' international influence. (3) **Hosting academic activities**: Since 2006, Chongqing University of Technology Journal Publisher has organized or co-organized 43 academic events of various scales. In 2017, it organized and co-hosted the first Ordnance Engineering Conference, inviting 6 academicians and 20 experts to present special reports, with nearly 600 participants, creating strong industry impact. The conference featured keynote presentations by renowned domestic and international scholars, many of whom serve as editorial board members and reviewers. Through academic conferences, the publisher not only builds exchange platforms for experts from universities, research institutes, and enterprises but also helps journals track frontiers and hot topics, strongly promoting future research and development in the field. While expanding journals' industry influence, these events also enhance the influence of journal expert teams, uniting experts closely around the journals. (4) **Participating in academic conferences**: The publisher sets up exhibition booths to promote journals, leveraging partner-organized academic conferences, summit forums, and expert symposiums for key columns to gather expert resources, organize quality manuscripts, and expand journal influence. (5) **Utilizing new media**: The New Media Department manages online promotion and new media platform operations, establishing public accounts for all six journals. Additionally, relying on journal and society resources, it has launched WeChat service accounts for Chongqing Applied Writing Society, Crazy Car Talk, and Electric Vehicle Research and Development. These ten public accounts have distinct responsibilities yet coordinate effectively, promoting academic papers and journal brands.

### 3.1 Accelerating Digitalization Construction

Adhering to a platform construction philosophy centered on user experience and driven by the academic needs of scientific and technological workers, the publisher strengthens digitalization construction by collaborating with IT companies, integrating massive academic digital resources, and jointly developing digital network platforms. It builds disciplinary databases to achieve resource sharing and intensive content production, serving the entire scientific research process. The publisher enhances published content with supplementary materials and data such as graphical abstracts, audio-visual content, and supplementary datasets, comprehensively upgrading user experience.

### 3.2 Emphasizing Brand Building

Committed to brand building and consistently prioritizing social benefits, the publisher recognizes that academic quality is fundamental to sustainable journal development. Adhering to a “content is king” philosophy, it builds a premium journal series by fully leveraging editorial board members’ academic influence to solicit outstanding manuscripts. Relying on expert-driven publishing, editors are required to identify authoritative experts and rising scholars in their disciplines to organize quality submissions. The publisher makes full use of internal university resources, promoting journals in relevant schools, research bases, and key laboratories, and actively soliciting manuscripts from teaching and research staff with provincial-level or higher research projects. It participates in academic conferences to promote journals, connect with experts, and expand high-level author pools. The publisher focuses on building brand conferences, continuing cooperation with the Chinese Association for Artificial Intelligence and the Fluid Power Control Engineering Professional Committee of the Chinese Society of Theoretical and Applied Mechanics to host the “Asian Conference on Artificial Intelligence Technology” and “International Conference on Fluid Power and Mechatronic Control Engineering,” establishing a premium brand image in disciplinary fields. It continues developing various derivative businesses to shape overall service capabilities, transforming from a single “content provider” to a “service provider.” By deepening cooperation with partners and serving industry sectors where journals operate, the publisher actively organizes academic activities that promote knowledge dissemination while enhancing cluster influence in relevant industries, achieving both brand and economic benefits.

Over the years, Chongqing University of Technology Journal Publisher has adhered to a cluster-based operation route, actively exploring how to leverage cluster advantages through large-scale publishing from multiple perspectives. It has forged a cluster-based publishing path suitable for its own development, effectively enhancing brand-building capacity and promoting the optimization and upgrading of university journal publishers. Through resource integration, unified management, institutional innovation, brand building, and learning from advanced experiences of other journal publishers, the publisher believes it can further enhance its influence and provide beneficial practices for the sustainable development of university journal publishers.

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(Author Affiliation: Chongqing University of Technology Journal Publisher)

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