Post-print: Building a New Ecology for Information Resource Management Discipline Development Empowered by New Quality Productive Forces

Authors: Chu Jingli, Liu Jingyi, Li Nan

Date: 2025-01-02T00:00:00+00:00

Abstract

Constructing a new ecosystem for the development of the information resource management discipline empowered by new quality productive forces is of great significance to the high-quality development of the discipline, constituting the core and key to discipline construction and development. This paper analyzes how the information resource management discipline should understand new quality productive forces from nine aspects including new thinking, new technologies, and new methods, advocating the integration of information resource productivity into discipline development; from the perspective of new quality productive forces, it elaborates on the connotation of the information resource management discipline ecosystem, proposes that the foundation of discipline construction lies in discipline ecosystem construction, and discusses respectively the traditional ecosystem and new ecosystem of the information resource management discipline; it proposes a construction path for the new ecosystem of the information resource management discipline, including strengthening top-level discipline design, adhering to the balance between tradition and innovation, striving to construct second-level disciplines well, highlighting new liberal arts characteristics and talent cultivation, strengthening research capabilities and research and teaching output, and narrowing the gap between academia and industry.

Full Text

Constructing a New Ecology for the Development of Information Resources Management Discipline Empowered by New Quality Productive Forces

Chu Jingli[1],[2], **Liu Jingyi**[1],[2], **Li Nan**[1],[2] [1]National Science Library, Chinese Academy of Sciences, Beijing 100190 [2]Department of Information Resources Management, School of Economics and Management, University of Chinese Academy of Sciences, Beijing 100190

Abstract: Constructing a new ecology for the development of information resources management discipline empowered by new quality productive forces is of great significance for the high-quality development of the discipline and constitutes the core and key to disciplinary construction and development. This paper first analyzes how the information resources management discipline should understand new quality productive forces from nine aspects, including new thinking, new technologies, and new methods, advocating the integration of new quality productive forces into disciplinary development. Then, using new quality productive forces as a frame of reference, it explains the connotation of disciplinary ecology in information resources management, proposes that the foundation of disciplinary construction is ecological construction, and discusses both the traditional ecology and new ecology of the discipline. Finally, it proposes pathways for constructing the new ecology of information resources management discipline, including strengthening top-level disciplinary design, adhering to both tradition and innovation, striving to build second-level disciplines, highlighting new liberal arts characteristics and talent cultivation, strengthening research capabilities and teaching outputs, and narrowing the gap between academia and industry.

Keywords: new quality productive forces; information resources management; information resources management discipline

---

Introduction

During inspection tours in Sichuan, Heilongjiang, Zhejiang, Guangxi, and other regions, the concept of "integrating scientific and technological innovation resources to lead the development of strategic emerging industries and future industries, and accelerating the formation of new quality productive forces" was first proposed. In the 2024 Government Work Report, the phrase "vigorously promoting the construction of a modern industrial system and accelerating the development of new quality productive forces" marked the first appearance of "new quality productive forces" in the Government Work Report. In May 2024, during the 11th collective study session of the Political Bureau of the CPC Central Committee, it was emphasized that "developing new quality productive forces is an inherent requirement and important focus for promoting high-quality

development," setting clear requirements for developing new quality productive forces. The key to developing new quality productive forces lies in innovation—whether innovation, especially high-level innovation, can be achieved determines the lifeblood of new quality productive forces. It can be said that new quality productive forces are essential elements for all fields to move toward high-quality development and represent an important path for achieving sustainable and healthy development.

The information resources management discipline urgently needs to construct a new development ecology based on new quality productive forces to actively promote its high-quality development. To achieve this, the discipline must have a full understanding of new quality productive forces, clarify their essential connotation, and use them as a perspective to examine disciplinary construction directions and formulate development strategies. The essence of new quality productive forces is innovation—achieving transcendence, breakthroughs, and even revolutionary changes in theory, technology, and methods while adhering to and inheriting the discipline's fundamental ideas and systems.

Nine Aspects for Understanding New Quality Productive Forces

The information resources management discipline should fully comprehend new quality productive forces from nine aspects: new drivers, new thinking, new technologies, new methods, new models, new services, new capabilities, new evaluation, and new business forms.

New Drivers: The discipline must actively align with national strategic needs, using these needs as the driving force for disciplinary development to ensure alignment between disciplinary growth and national strategy.

New Thinking: The discipline needs to propose new perspectives and cognition, develop new visions for development, and have the courage to surpass previous research and achieve breakthroughs based on prior thinking.

New Technologies: While the discipline has always emphasized discussion and application of new technologies, under the perspective of new quality productive forces, it needs to further integrate big data, artificial intelligence, metaverse, and other new technologies to promote the formation of technology-driven new quality productive forces.

New Methods: Research on disciplinary methodologies has always been a key issue for disciplinary maturity. From the perspective of new quality productive forces, the discipline requires iterative upgrading of its methodological system to continuously optimize research methods and enhance their importance.

New Models: The discipline needs to move from a single-disciplinary development model to a cluster model, breaking the traditional situation where library science, information science, and archival science developed relatively independently and in isolation. After the first-level discipline was renamed information resources management, there is a need to build a disciplinary cluster

development model.

New Services: Building upon document services and information services, the discipline must continue to promote knowledge services and ultimately achieve intelligent knowledge services (smart services).

New Capabilities: The discipline needs to demonstrate its contribution to industry and society, enhance its social value and visibility, strengthen its discourse power, and cultivate more outstanding talents to contribute to society and the nation.

New Evaluation: The ultimate goal of the discipline is to cultivate talents needed by the nation and society. The discipline's faculty, research strength, and curriculum system require new configurations. New evaluation primarily reflects the recognition and reputation of graduates in the workplace and serves as comprehensive feedback from industry on disciplinary education.

New Business Forms: The discipline needs to integrate government-industry-academia-research innovation development, break through relatively isolated academic or research models, face application fields and industrial development, provide policy support, and strive to achieve the transformation from intelligence to think tanks, serving public policy development needs.

Integrating New Quality Productive Forces into Disciplinary Development

The information resources management discipline must actively conduct and strengthen research on new quality productive forces to ensure they have a positive and important impact on disciplinary development. From a disciplinary development perspective, academia and industry should not take the discussion and research of new quality productive forces for granted as "old wine in new bottles," nor should they resist or passively regard such discussions as blindly "following trends" or "hyping concepts." Instead, they should embrace a positive and correct attitude toward the potential transformation, transition, and breakthroughs that new quality productive forces may bring to disciplinary development. This requires the discipline to have the ability to keep pace with the times, organically integrate its own development with national strategy, and generate positive impacts in multiple aspects. It should promote researchers and practitioners to enhance their understanding and systematic thinking about new quality productive forces, while forming richer excellent practice cases to guide the discipline toward a deeper understanding of the connotation and significance of new quality productive forces, thereby further promoting the organic integration of disciplinary development with national strategic needs.

The Foundation of Disciplinary Construction Is Ecological Construction

Ecology is not only a field of natural science studying organisms and their environment. With interdisciplinary integration, it has been applied to various disciplines and fields across society, encompassing key issues such as biodiversity, mutualistic symbiosis, ecosystems, interactions, harmonious development, evolution, ecological ethics, and sustainable development.

From an ecological perspective, the important foundation of information resources management disciplinary construction is ecological construction. A good disciplinary ecology leads to continuous growth, stronger and more robust strength, significantly improved disciplinary status, highlighted competitive advantages, and enhanced recognition and contribution in academia, industry, and society, thereby strengthening disciplinary and professional confidence. From the perspective of new quality productive forces, ecological construction is the top priority in disciplinary construction. It requires actively viewing disciplinary development issues within the context of developing new quality productive forces, grasping the key points of ecological construction, deeply considering the supporting and promoting role of new quality productive forces in disciplinary ecological construction, continuously accumulating excellent cases of new quality productive forces boosting ecological construction, enriching and improving relevant theoretical research, and promoting new quality productive forces to play a greater and more effective role in ecological construction.

Traditional Ecology of Information Resources Management Discipline

During the "Library, Information, and Archives Management" (hereafter "LIS") period, the information resources management discipline was in a traditional ecological state. At that time, library science, information science, and archival science developed in isolation without a common theoretical foundation. The number of corresponding second-level disciplines was small. Although library science and information science had similarities and connections, they differed significantly from archival science. Overall, they were "fighting their own battles" with insufficient cooperation and collaboration. The discipline was relatively closed internally, lacked cross-integration with external disciplines, held insufficient status and influence in the broader disciplinary landscape, and made limited contributions to other disciplines. Its academic attributes leaned toward humanities and social sciences ("soft" disciplines), lacking support and application from natural sciences, technological disciplines, and management disciplines in terms of methods, technologies, and tools ("hard" disciplines). An overly "soft" discipline tends to have low status, unable to demonstrate its influence and value or possess strong discourse power in the disciplinary forest. There was also a disconnect between theoretical teaching and practical application, with a lack of integration and connection between academia and industry, creating a significant gap. Academic circles often focused on pure theoretical research lacking practical foundation and verification, while practitioners focused only on

practical business work, lacking theoretical foundation and literacy. Academia might not understand the actual needs and development dynamics of practice, while industry might not be aware of theoretical developments and innovation trends, creating opposition between the two. This traditional ecology cannot meet the requirements of new quality productive forces and cannot effectively support disciplinary construction and development.

Need for New Ecology in Information Resources Management Discipline

From the ecological perspective of the information resources management discipline, the new ecology should fully follow the basic principle of upholding tradition while innovating, adhere to the discipline's inherent core, focus on solving problems existing in the traditional ecology, further strengthen the introduction and application of technologies and methods, promote internal reengineering and optimization of the discipline, enhance disciplinary openness and integration, and promote innovation in disciplinary theory and technical methods. This will achieve a substantive transformation from the traditional "LIS" to "information resources management," completing a major transformation in disciplinary content and systems.

Paths to Constructing the New Ecology of Information Resources Management Discipline Empowered by New Quality Productive Forces

1. Strengthening Top-Level Disciplinary Design Strengthening top-level disciplinary design is the most critical path for constructing the new ecology of information resources management discipline. Top-level design can establish direction and goals for the new ecology, lay a solid foundation for disciplinary development, consolidate basic theories of information resources management in the new era, study the discipline's basic framework, and ensure healthy disciplinary development, having a long-term impact on the discipline. Top-level design must first promote the construction of a common theoretical foundation across all second-level disciplines, enabling expansion and deepening under a unified disciplinary framework, and guiding different disciplinary field contexts under a common theoretical, technical, and methodological system. Each second-level discipline should design distinctive construction goals, implement differentiated development according to market demands, application scenarios, and professional characteristics, develop professional features and advantages facing different needs, enhance professional competitiveness, and promote high-quality development of specialties based on information, knowledge, data, and intelligence.

Whether at the first-level or second-level, the sustainability and future status of a discipline depend on its core capabilities, and strong core capabilities are necessary conditions for forming disciplinary competitiveness. Faced with constructing a new ecology for new quality productive forces, each disciplinary

point should be encouraged to form its unique advantages and characteristics under the unified category of information resources management, build an overall strategy for disciplinary construction, and promote sustainable development of the disciplinary ecosystem.

2. Adhering to Both Tradition and Innovation An important task in building the new ecology of information resources management discipline is to uphold both tradition and innovation. Upholding tradition means continuing to inherit the advantages and traditions of library science, information science, and archival science, adhering to the discipline's classics and essence. Renaming the first-level discipline from "LIS" to "information resources management" does not mean "LIS" no longer exists. In fact, the "information resources management" first-level discipline will strengthen all second-level disciplines, including library, information, and archival studies, providing stronger theoretical, technical, and methodological support. The ecological development of information resources management cannot be separated from the advantages accumulated and traditions retained by LIS—these constitute the discipline's profound foundation and core capabilities. Only by following the discipline's main axis and underlying logic can we lay a solid foundation in constructing the new ecology.

The main axis and underlying logic of the discipline are the progression from documents to information, to intelligence, to data, to knowledge, and to wisdom, with knowledge organization, knowledge management, and knowledge service as the discipline's core capabilities and main competitive strengths. From a positioning perspective, information resources management is not a technical discipline but an applied one, with its main application field being knowledge organization, knowledge management, and knowledge service.

The construction of the discipline's new ecology requires both tradition and innovation. Without tradition, innovation becomes a tree without roots or water without a source. Empowered by new quality productive forces, digital intelligence technology serves as the means of production, and data serves as the object of production. Therefore, disciplinary innovation requires the discipline to adhere to "digital intelligence" as the leading force for continuous transformation and development. Based on LIS, more second-level disciplines should be expanded under the dimension of information resources management to further improve educational levels, promote theoretical, technical, and methodological evolution toward new liberal arts, interdisciplinary studies, and hard disciplines, and strengthen the transformation of this discipline and its integration with other disciplines. We must both consolidate the foundation and be inclusive, enriching and perfecting the ecological connotation and development framework of information resources management discipline.

3. Striving to Build Second-Level Disciplines Well During the LIS period, there were mainly three second-level disciplines. In 2012, three more were added: information resource management, publishing management, and

information analysis. In 2022, the information resources management first-level discipline added digital humanities, data management and data science, public cultural management, ancient book protection and philology, health informatics, confidentiality management, and other second-level disciplines. Under the new perspective of new quality productive forces, building second-level disciplines also requires clarifying paths that align with their developmental characteristics. Within the development framework of the first-level discipline, second-level disciplines must grasp their construction direction under the new mission of the new era. Focusing on emerging production factors—technology and data—they should establish key and core elements for second-level discipline development, improve development efficiency based on factor synergy mechanisms, strengthen deep integration of disciplinary knowledge, education, technology, and data, and strive to build new business forms for disciplinary development.

4. Highlighting New Liberal Arts Characteristics and Talent Cultivation The ecological construction of information resources management discipline needs to highlight new liberal arts characteristics that align with new goals and new demands. Specifically, it should emphasize cross-integration and cooperation with other disciplines, stress the introduction and application of technologies, methods, and tools, and transform from a "soft" discipline to a "hard" discipline. It must clarify necessary transformations and changes in theory, technology, and methods, rationally apply new thinking, theories, technologies, methods, tools, and applications brought by new liberal arts, strengthen practical applications and actual effectiveness, and emphasize the understanding and sublimation of disciplinary connotation. It should establish and undertake research topics based on new scenarios, write and publish more and higher-quality monographs, and build the knowledge architecture of faculty and researchers from a new perspective. The discipline should examine its internal structure and system, focus on organic interaction with new contexts in training objectives, teaching content and methods, and professional literacy, and use digital intelligence technology as a powerful tool to lead the disciplinary ecology toward new breakthroughs. It should innovate disciplinary theories and practical applications, promote the combination of theory and practice, connect academia and industry, break traditional barriers between them, and focus on the education and cultivation of professional talents to build competitiveness in theory, practice, technology, and methods. This will produce new types of high-quality talent outputs that match market demands and can serve government departments, enterprises, publishing institutions, evaluation agencies, research institutions, and higher education institutions, promoting sustainable and high-quality disciplinary ecological construction.

5. Strengthening Research Capabilities and Teaching Outputs Based on certain current indicators, information resources management is not a large discipline but a medium-sized one, with its disciplinary status gradually recognized by academia and society. We should establish disciplinary confidence,

and on the basis of adhering to basic concepts, theories, history, methods, and core principles, actively strengthen research capabilities from the perspective of constructing the new ecology. This includes enriching professional knowledge, accumulating more and higher-quality research outputs including papers, monographs, textbooks, patents, standards, software, research reports, and policy recommendations, forming knowledge capabilities based on new production factors. Clear research objectives should be formulated to deeply study new changes in information resources management, excavate disciplinary connotation, grasp the disciplinary core, solve core disciplinary problems, and seek breakthroughs in blind spots, misunderstandings, and questionable areas. The discipline must keep pace with era and technological changes, transform mental models, learn critical thinking, judge problems from new perspectives, and be adept at conducting intelligence analysis on research questions to formulate better solutions, thereby achieving better balance between theory and practice.

6. Narrowing the Gap Between Academia and Industry Similar to other disciplines, the gap between academia and industry has long existed within information resources management. Constructing the new ecology requires efforts to narrow this gap. Academia and industry differ in goal orientation, work content, capability systems, and evaluation criteria. From an academic perspective, there is greater emphasis on research-driven approaches, requiring the combination of theoretical research and practical needs, professional education and vocational ability, digital intelligence literacy and innovation capability cultivation, knowledge inheritance and knowledge creation, and core capabilities and interdisciplinary studies. From an industry's perspective, there is greater emphasis on business capability and actual effectiveness. From the disciplinary attribute of information resources management, both require research-driven approaches and the combination of theoretical research and practical needs. The construction of disciplinary ecology requires joint support from theory and practice, which must form organic synergy, mutual support, and complementarity. Theoretical research detached from practice has no application value, and practical work lacking theoretical support may increase trial-and-error risks. Only by emphasizing both theory and practice and achieving their organic combination can we become the greatest source of power for disciplinary development. Within the discipline, both academia and industry, as labor elements, should have a sense of responsibility and professional spirit. Empowered by new quality productive forces, they should regard disciplinary ecological development as an important mission and core task, building a vibrant new ecological system that provides strong support for industrial development.

Conclusion

New quality productive forces have put forward new demands, challenges, and opportunities for the construction of information resources management discipline. With a positive mindset, we must construct a new ecology for the discipline to inject new vitality into its development. This requires the discipline to

have a more open and inclusive mindset, empowering disciplinary construction with new quality productive forces. Meanwhile, the prosperity and development of information resources management discipline will also enrich the connotation of new quality productive forces. The discipline must actively construct core capabilities and competitiveness empowered by new quality productive forces, continuously consolidate basic consensus and development strategies under the new first-level disciplinary framework, enhance new cognition and consensus on information resources management, formulate overall strategies supporting second-level discipline construction, and build a new ecology of information resources management driven by and interacting with new quality productive forces, promoting the discipline to seek quality through innovation.

References

[1] Xi Jinping. Developing new quality productive forces is an inherent requirement and important focus for promoting high-quality development [EB/OL]. [2024-08-13]. https://www.gov.cn/yaowen/liebiao/202405/content_{6954761}.htm.

[2] Chinese Government Website. Look! New quality productive forces in the Government Work Report [EB/OL]. [2024-08-13]. https://www.gov.cn/zhengce/jiedu/tujie/202403/content_{

[3] Lin Yifu, Huang Qifan, Zheng Yongnian, et al. New Quality Productive Forces: The Focus and Intrinsic Logic of China's Innovative Development [M]. Beijing: China Citic Press, 2024.

[4] Li Zhilong. Service and transcendence: Two-way interaction between new quality productive forces and high-quality development of the publishing industry [J]. China Publishing Journal, 2024(12): 15-20.

[5] Zhou Weihua, Xiong Xiaoming. Function and realization path of the publishing industry in developing new quality productive forces [J]. Chinese Editors Journal, 2024(6): 4-10.

[6] Chen Shaozhi, Li Ping. Three-dimensional path for promoting deep integration and development of publishing under new quality productive forces [J]. China Publishing Journal, 2024(12): 21-26.

[7] Chu Jingli, Huang Shuiqing. From "library, information and archives management" to "information resources management": Some analysis and reflections on renaming the first-level subject [J]. Library and Information Service, 2022, 66(14): 3-9.

[8] Feng Huiling. Redrawing the disciplinary blueprint in the name of information resources management [J]. Journal of Information Resources Management, 2022, 12(6): 4-10.

[9] Zhang Xinxin, Zhou Yingyan. Implications, theoretical mechanisms and strategy construction for enhancing total factor productivity of the publishing industry through new quality productive forces [J]. Journal of University of

Shanghai for Science and Technology (Social Sciences Edition), 2024, 46(4): 339-348.

(Received: August 26, 2024)

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