

# High-Quality Development of University Academic Journals Under Digital Transformation: Core Connotations, Practical Challenges, and Concrete Pathways (Postprint)

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## Abstract

**[Objective]** In the context of digital transformation, achieving high-quality development for university academic journals necessitates the realization of specialized, distinctive, and integrated development. **[Method]** By integrating the current development status of university academic journals, this study explores the pathways for their high-quality development under the background of digital transformation. **[Results]** The high-quality development of university academic journals under digital transformation faces a series of dilemmas: unclear positioning of digital knowledge production in university academic journals, low efficiency of knowledge production; insufficient digital knowledge dissemination channels and unscientific dissemination methods; imperfect digital knowledge service models that cannot meet the needs of authors and readers, etc. **[Conclusion]** To resolve these dilemmas, university academic journals under the background of digital transformation should achieve full-process digital knowledge production to serve discipline construction; achieve full-chain digital knowledge dissemination to promote efficient dissemination of university academic journals; and achieve all-round digital knowledge services to meet the needs of authors and readers.

## Full Text

### High-Quality Development of University Academic Journals Under Digital Transformation: Connotations, Practical Dilemmas, and Specific Pathways

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## Abstract

**[Objective]** Under digital transformation, university academic journals must achieve specialized, characteristic, and integrated development to realize high-quality development. **[Methods]** This study examines the current development status of university academic journals to explore pathways for their high-quality development within the context of digital transformation. **[Results]** The high-quality development of university academic journals under digital transformation faces a series of dilemmas: unclear positioning of digital knowledge production leading to low efficiency; insufficient digital knowledge dissemination channels and unscientific dissemination methods; and imperfect digital knowledge service models that fail to meet the needs of authors and readers. **[Conclusion]** To address these dilemmas, university academic journals under digital transformation must implement full-process digital knowledge production to serve discipline construction, establish full-chain digital knowledge dissemination to promote efficient journal communication, and provide comprehensive digital knowledge services to satisfy author and reader demands.

**Keywords:** university; academic journal; knowledge production; knowledge dissemination; knowledge service

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## 1. The Connotation and Essence of High-Quality Development of University Academic Journals

University academic journals, sponsored by universities, serve as crucial platforms for scientific research, teaching reform, and academic exchange. Compared with ordinary academic journals, they are university-affiliated, subject to university management and constraints, and simultaneously serve their institutions, forming a mutually beneficial relationship. In his reply to all editorial staff of the *Journal of Literature, History, and Philosophy*, Xi Jinping pointed out: “High-quality academic journals must remain true to their original aspiration, lead innovation, showcase high-level research achievements, support the growth of outstanding academic talent, and promote Chinese and foreign academic exchanges” [1]. This statement charts the course for academic journal development. As the mainstay of China’s academic journal landscape, university academic journals have made significant contributions to discipline development, academic communication, and talent cultivation [2]. With rapid advancements in digital technology, university academic journals face enormous challenges in determining their development direction. Confronting the practical dilemmas in their development and identifying breakthrough points to find pathways aligned with their own high-quality development has become a critical issue.

University academic journals represent a special type of publishing institution compared to ordinary academic journals, functioning as knowledge repositories containing various advanced, authoritative, and professional scientific and cul-

tural knowledge, as well as a significant portion of the nation' s researchers [3]. Digital transformation of university academic journals is an inevitable trend, requiring digitalization throughout the entire publishing process to achieve digital knowledge production, digital knowledge dissemination, and digital knowledge services, thereby constructing a three-dimensional, integrated digital publishing ecosystem. The *Opinions on Promoting the Prosperous Development of Academic Journals* emphasizes strengthening editorial planning, creating key columns and special issues around major themes, enriching content forms, and innovating column designs such as disciplinary information, academic reviews, and academic commentaries [4]. Consequently, the high-quality development of university academic journals must rely on digital transformation to achieve specialized, characteristic, and integrated development.

### 1.1 Specialized Development

Amid increasingly complex information environments, university academic journals must pursue a path of disciplinary specialization to achieve high-quality development. This involves establishing specialized academic journals based on university strengths and disciplines to realize genuine specialized development. Specialization refers to the professional quality of journal content, which must gain recognition from professional and authoritative experts. University academic journals possess inherent advantages for specialized development through their university affiliation. They can leverage their institutions' superior disciplines to develop into specialized academic journals, with university academic resources supporting their high-quality development.

### 1.2 Characteristic Development

University academic journals can access more resources through their university affiliation. Within this mutually beneficial relationship, they must utilize their university attributes to pursue characteristic development. While most universities are comprehensive institutions with correspondingly comprehensive journals, each possesses distinctive and strong disciplines. University academic journals can establish characteristic columns based on these strengths while also leveraging local special development projects to create unique columns and forge a path of characteristic development.

### 1.3 Integrated Development

Integrated development has two dimensions. First, university academic journal development must keep pace with university development itself. Currently, most journals lag behind their institutions in development and influence due to differing evaluation systems. In this context, journals must align with contemporary trends to achieve integrated development with their universities, serving discipline construction and realizing symbiotic growth. Second, integrated development requires digital transformation across every link in the publishing

process. University academic journals maintain unique publishing rhythms under continuous publication, and they must synchronize with the era's pace by achieving digital transformation in every process 环节.

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## 2. Practical Dilemmas in the High-Quality Development of University Academic Journals

To achieve high-quality development, university academic journals must leverage digital transformation advantages to implement digital knowledge production, dissemination, and services, achieving specialization, characteristic development, and integration at each stage. However, they face the following dilemmas in this process.

### 2.1 Unclear Positioning of Digital Knowledge Production and Low Production Efficiency

Knowledge production transforms specific content into authoritative and professional knowledge through editorial processing, with high-quality content forming the foundation for journal excellence. In this era of information overload and explosion, academic journals must publish specialized content. As a major category of academic journals, university journals face several problems in knowledge production.

First, unclear positioning of digital knowledge production fails to serve discipline construction effectively. As essential components of university academic systems, university academic journals play important roles in academic construction while also receiving development opportunities from serving disciplines [5]. However, university journals currently receive insufficient institutional attention due to two main reasons: journal construction evaluation indicators have little connection with university excellence evaluation metrics, marginalizing journals in “double first-class” discipline construction; and universities have not recognized the relationship between journal construction and discipline development. Consequently, unclear positioning of digital knowledge production prevents effective service to discipline construction, hindering specialized and characteristic development.

Second, low knowledge production efficiency and ethical dilemmas from AI application. Editors control production themes through commissioned manuscripts and quality through editorial processes. Artificial intelligence technology has transformed editorial processes, yet university academic journals rarely utilize advanced AI for editing and publishing, resulting in low efficiency. Academic hotspots emerge and vanish rapidly, but traditional editorial workflows prevent journals from keeping pace. Even when hotspot manuscripts are commissioned, they cannot be published on schedule due to editorial process delays, affecting high-quality development. Meanwhile, widespread AI application creates

ethical dilemmas. AI's text creation and rewriting capabilities can easily generate papers indistinguishable from human work. Sometimes authors submit AI-generated papers out of laziness, and editors cannot detect them, compromising academic ethics and integrity while hindering high-quality development.

## **2.2 Insufficient Digital Knowledge Dissemination Channels and Unscientific Dissemination Methods**

The purpose of knowledge production is knowledge dissemination, which has transformed significantly with digitalization. Efficient knowledge dissemination demonstrates a journal's specialization and characteristic development. However, most university academic journals focus only on production, neglecting dissemination and thus failing to fully realize production's purpose.

First, weak dissemination awareness and insufficient digital channels. Some journals remain focused solely on print publication, relying only on third-party databases for digital dissemination without establishing their own channels. Editorial staff lack dissemination awareness and media literacy, making it difficult to build full-chain dissemination pathways or integrate with university communication channels to expand influence.

Second, unscientific digital dissemination methods and low reader acceptance. Digital transformation has increased information volume while changing dissemination methods and reading habits. Readers now exhibit fragmented reading patterns, preferring images and short videos over traditional academic journal dissemination methods. Besides downloading articles from CNKI and similar databases, readers increasingly access content via mobile devices, yet journal content remains unsuitable for mobile reading. Most journals simply copy and paste print content without multimedia elements or mobile-intelligent development [6], maintaining one-way communication.

## **2.3 Imperfect Digital Knowledge Service Models Failing to Meet Author and Reader Needs**

University academic journals must provide high-quality knowledge services to authors and readers throughout production and dissemination, including paper reading services for readers and submission services for authors. Traditional publishing processes neglect these services, failing to satisfy author and reader needs.

First, insufficient attention to long-term author relationships and underutilization of university academic resources. Current digital service models feature limited editor-author communication, preventing editors from understanding authors' research fields and previous publications or establishing long-term relationships to attract resubmissions. They neglect resource accumulation and reputation building with established authors. Additionally, while university academic resources constitute important assets for journal development, journals

fail to leverage these resources, cannot attract high-quality manuscripts from faculty, and waste this valuable resource.

Second, insufficient reader services and failure to establish active contact. Readers may become future authors, but most university academic journals ignore post-reading feedback and communicate little with readers, failing to use digital technology to provide better services. University faculty represent the most accessible reader group, yet journals underutilize this advantage and interact little with them, missing direct feedback opportunities.

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### 3. Specific Pathways for University Academic Journals to Achieve High-Quality Development Under Digital Transformation

Under digital transformation, university academic journals must achieve digitalization at every process and stage, utilizing digital technology to implement digital knowledge production, dissemination, and services.

#### 3.1 Implement Full-Process Digital Knowledge Production to Serve Discipline Construction

University academic journals must integrate digital transformation into their publishing processes to achieve high-quality content production, building digital knowledge production models across topic planning, commissioned manuscripts, plagiarism detection, peer review, and editing-proofreading.

First, actively serve discipline construction to gain university attention. University academic journals must clarify their positioning by actively serving discipline construction. Their purpose is to disseminate university research achievements and promote discipline development, creating close connections with institutional development. Journals should establish characteristic and specialized columns based on university strengths, forming synergies with their institutions for specialized and characteristic development. Some university journals have already transformed into specialized disciplinary journals, such as *Journal of Southwest China Normal University (Natural Science Edition)* renaming to *Artificial Intelligence Science and Engineering*, and *Journal of China University of Political Science and Law* renaming to *Tribune of Political Science and Law* with a featured “Rule of Law Culture” column serving discipline construction. Therefore, journals should actively adjust columns around disciplinary characteristics and priorities, planning topics timely to demonstrate their contribution to university development and gain institutional attention. They must strengthen university linkages for integrated development and mutual progress.

Second, implement full-process digital knowledge production to improve quality and efficiency. The key to high-quality development lies in high-quality papers. On one hand, AI technology is unavoidable in digital transformation. Journals

can utilize AI for knowledge production, as academic information resources now appear in digital formats, and AI can improve topic planning accuracy and stability [8]. With rapid knowledge updates, journals must keep pace with digital technology to improve efficiency and publish timely papers on current hotspots. Most journals have fixed columns, and editors can use AI for editing and proof-reading to improve review and 校对 efficiency. Editorial departments should leverage digital production convenience by building proprietary platforms or using third-party platforms to enhance process efficiency. On the other hand, journals must strengthen detection of AIGC papers. With AIGC paper proliferation, journals should utilize digital technologies to detect them, ensuring paper quality and originality.

### **3.2 Establish Full-Chain Digital Knowledge Dissemination to Promote Efficient Journal Communication**

Knowledge services primarily refer to journals utilizing their resources and platform advantages to provide knowledge, information, and services to faculty, students, researchers, and research organizations [11]. Academic dissemination must actively provide knowledge services for more efficient communication and faster utilization [12]. AI technology has transformed knowledge services from passive response to user-demand-oriented models [13]. University academic journals must shift their development mindset to become user-demand-oriented, focusing on author and reader needs to provide high-quality, professional services.

First, provide high-quality long-term services to authors. University academic journals must use digital technology to serve authors well. While attracting renowned experts, journals also draw many young scholars who may become future leaders, so they must cultivate potential experts by providing excellent services that create positive impressions and enhance influence. Journals should maintain long-term author relationships by sending recently published themes or articles related to authors' research interests to encourage continued attention and resubmissions. Additionally, universities possess quality disciplines, and journals should actively attract faculty from these disciplines to submit high-quality manuscripts, serving discipline construction and supporting high-quality development.

Second, emphasize reader services and establish active contact. In the editor-reader relationship, readers help researchers stay informed about latest developments and achievements [14]. Readers represent potential author resources, and journals must provide high-quality services that meet their needs and improve overall impressions. Journals can build friendly knowledge service systems using differentiated, personalized knowledge 推送 methods based on user needs [15]. Readers want to understand submission requirements, so journals should clearly display such information on proprietary websites, WeChat official accounts, or university sites. When readers want to communicate with journals, platforms must be established for high-quality service, such as opening reader letter functions on WeChat official accounts to solicit suggestions. Furthermore, university



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

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