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Analysis of Post-Print Traditional Publishing Knowledge Service Products in China

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Abstract

In the context of transformation from traditional publishing to digital publishing, knowledge services represent a widely recognized direction. While some foreign traditional publishers have taken the lead in this domain, through years of state support and exploration by publishing houses, a number of representative knowledge service products released by domestic traditional publishers have also emerged. These knowledge service products primarily integrate their own advantageous professional publishing resources, supplemented by entry-based knowledge such as encyclopedias and dictionaries, to form knowledge service products targeted at professionals.

Full Text

Preamble

In the transition from traditional to digital publishing, knowledge services represent a widely recognized direction. While some foreign traditional publishers have taken the lead in this domain, domestic publishers—supported by national policies and their own exploratory efforts—have recently developed a number of representative knowledge service products. These offerings primarily integrate the publishers' proprietary professional publishing resources, supplemented by encyclopedia entries, dictionary definitions, and similar reference materials, to create knowledge services tailored for professional audiences.

Keywords: professional publishing; knowledge services; knowledge service products; traditional publishing; domestic publishers

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1. Product Introduction

Traditional publishers' knowledge services exhibit several distinctive characteristics. Their advantages include: (1) public relations capital, as most professional publishers are affiliated with and supervised by authoritative industry management bodies; (2) access to professional editorial talent and specialized content; and (3) well-established distribution channels. However, they also face significant disadvantages: (1) institutional structures that hinder market competitiveness and outdated conceptual frameworks; (2) evaluation systems for editors that fail to incentivize proactive engagement; (3) lack of technical teams, making continuous optimization and maintenance difficult; and (4) varying scales and limited publishing output.

1.1 People's Court Press "FaXin" (Legal Information)

URL: <http://www.faxin.cn/>

Coverage: Law

Resource Types: Cases, judicial documents, regulations, journals, books, encyclopedia entries

Entry Information: Legal provisions, viewpoints, case studies

Target Audience: Legal professionals including prosecutors, judges, lawyers, and law school faculty and students

Service Features: (1) **Browsing by Category:** Provides the FaXin Outline, which organizes rights and charges involved in various legal domains (FaXin Codes) in a tree structure, linking relevant laws, cases, viewpoints, journals, and books; (2) **Search:** Offers comprehensive search services by field and resource type; (3) **Similar Case Retrieval:** Provides case similarity search functionality; (4) **Personal Center:** Includes complete services such as favorites, notes, search history, followed FaXin Codes, billing, and submissions; (5) **Multi-platform Access:** Available via both app and PC interfaces.

Summary: The platform features a well-developed functional architecture and authoritative content. Its limitations include relatively limited journal and book resources, unclear journal hierarchical structure, dark and unclear color schemes, and a lack of interactive features at the individual user level.

1.2 People's Medical Publishing House

1.2.1 RenWei Clinical Assistant **URL:** <http://ccdass.ipmph.com/main/goIndex>

Coverage: Medicine

Resource Types: Disease encyclopedia, case studies, medical dictionaries, web pages (information bulletins), doctor-patient communication guides, regulations

Entry Information: Clinical ethical reasoning, dictionary definitions, clinical laboratory tests, ECGs, typical cases (sourced from books such as *Clinical ECG Analysis* and *Laboratory Diagnostics*), regulations from legal sources, and doctor-patient communication scenarios from various communication manuals.

Target Audience: Clinical medical practitioners

Service Features: (1) **Browsing by Category:** Provides encyclopedic knowledge of diseases, typical cases, ECGs, and other routine categories; (2) **Search Services:** Enables searching by disease, symptom, etc., with results displaying diseases, cases, and multi-dimensional knowledge decisions (doctor-patient communication, regulations, injury prevention, medical ethics, medical standards, etc.) in an integrated, correlated manner with secondary filtering options; (3) **Auxiliary Tools:** Includes ECG references, clinical laboratory guides, medical dictionaries, and medical calculators; (4) **Hospital Management Services:** Requires institutional verification for access, offering shared resources and other organizational services (specific functions unclear); (5) **Multi-platform Access:** Available via app and PC; (6) **Personal Center:** Provides comprehensive personal services.

Summary: The platform demonstrates sophisticated content structuring tailored to clinical characteristics, authoritative resources, and detailed functionality. A notable drawback is its lack of support for Boolean logic (AND/OR/NOT) operators and poor support for natural language queries.

1.2.2 RenWei Drug Assistant URL: <http://pharmacy.ipmph.com/index.html>

Coverage: Medicine

Resource Types: Drug instructions, cases, prescriptions, off-label drug usage guidelines

Target Audience: Clinical medical practitioners

Service Features: (1) **Search:** Supports searching by drug name, disease name, or symptom with Boolean operators; (2) **Browsing by Category:** Offers navigation by disease and department; (3) **Knowledge Association:** Provides browsing via knowledge graph clicks; (4) **Personal Center:** Includes comprehensive services such as notes, favorites, and comments; (5) **Multi-platform Access:** Available via app and PC.

Summary: The platform has distinctive features centered on drugs, supplemented by diseases, symptoms, and pharmacological actions, with complete functionality.

1.2.3 RenWei Clinical Knowledge Base URL: <http://medbooks.ipmph.com/medical/medbooks/index.zl>

Coverage: Medicine

Resource Types: For Western medicine: 4,976 books, 54,135 case discussions, authoritative clinical guidelines by specialty, 196,400 drug information entries, and 1.185 million charts and videos; For Traditional Chinese Medicine: 731 books, 108,400 case discussions, authoritative clinical guidelines by specialty, and 68,400 charts and videos.

Entry Information: Books are structurally processed to extract content such as overviews, pathogenesis, clinical manifestations, and treatment protocols.

Target Audience: Clinical medical professionals

Service Features: (I) **Specialized Organization:** Distinguishes between Western and Chinese medicine, primarily using structured books and cases as core content to support clinical decision-making; (II) **Navigation and Search:** Provides browsing via Chinese Library Classification, disease classification, and drug classification; offers quick search, advanced search, and secondary filtering; (III) **Content Association:** The system automatically recommends related knowledge based on established relationships between diseases, procedures, laboratory tests, symptoms, and drugs, while also recommending relevant guidelines, case discussions, and videos; (IV) **Personal Center:** Comprehensive services; (V) **Multi-platform Access:** Available via app and PC.

Summary: The platform features clear organization centered on clinical knowledge correlation and classification, with complete functionality.

1.3 Social Sciences Academic Press “Pishu Database”

URL: <https://www.pishu.com.cn/>

Coverage: Social sciences, economics, cultural media, international relations

Resource Types: Books, journals, encyclopedia entries, news, reports, videos

Entry Information: Book chapter catalogs and charts

Target Audience: Teachers, students, researchers, and government officials studying social sciences, regional development, industry development, economic development, and China-world relations; foreign institutions seeking to understand China

Service Features: (I) **Core Content:** Based on over 2,000 “Pishu” series research reports, the platform comprehensively integrates research literature, empirical reports, survey data, and media information on China’s development and global economic and international relations issues. It provides literature search and knowledge services oriented toward user needs, serving as an intellectual platform for in-depth analysis and interpretation of current and future trends in China and global socioeconomic development; (II) **Search Methods:** Offers various search approaches including resource classification and master database search; (III) **Navigation:** Provides browsing by album/sub-database/hot topics and various classification systems; (IV) **Personal Center:**

Includes relatively complete services such as favorites, recharge/order queries, browsing/search history; (V) **Multi-platform Access:** Available via app and PC.

Summary: The platform centers on its core Pishu series, with comprehensive content and sustainable operational capacity.

1.4 China Agriculture Press “ZhiHui SanNong” (Smart Agriculture)

URL: <http://www.pwsannong.com/>

Coverage: Agriculture

Resource Types: Books, conferences, projects, news, patents, encyclopedia entries

Entry Information: Images extracted from books and other resources; book chapter structures (without corresponding content); Q&A knowledge structurally extracted from books

Target Audience: Agricultural practitioners including university faculty and students, farmers, farm owners, research institute personnel, and enterprise employees in agricultural production

Service Features: (I) **Core Content:** An online search and access knowledge service platform built primarily around agricultural books; (II) **Search:** Provides general and advanced search by resource type; (III) **Sub-databases:** Offers themed sub-database services with category navigation; (IV) **E-commerce:** Provides book e-commerce services; (V) **Encyclopedia and Q&A:** Offers encyclopedia (knowledge graph) and Q&A services; includes personal center services such as favorites and browsing history, with personal data import (though functionality has issues); (VI) **Multi-platform Access:** Available via app and PC.

Summary: The platform offers online knowledge services centered on agricultural books with e-commerce functionality, forming sustainable operational service capacity.

1.5 China Machine Press “China Equipment Manufacturing Intelligent Knowledge Base”

URL: <http://www.cmanuf.com/guide>

Coverage: Mechanical manufacturing

Resource Types: Encyclopedia entries, books, experts, products, cases, images

Target Audience: Mechanical industry professionals

Service Features: The platform constructs a mechanical industry knowledge classification system and gradually improves encyclopedia, product, and book

information through interactive website building by registered users, with administrator review before publication and historical version viewing. Images are uploaded by users without source attribution. Entry correlation is implemented. Enterprise services require separate activation and cannot be trialed.

Summary: Overall resources are limited, with much content sourced from the internet, lacking authority, and with some confusion in navigation and search systems. However, the editor is powerful, supporting custom fields, formula insertion, standardized reference filling, video embedding, terminology standardization prompts, and two-level structural processing of main text—essentially referencing the Baidu Baike editor.

1.6 China Social Sciences Press “China Social Science Yearbook Database”

URL: <http://www.eyearbook.cn/>

Coverage: Social sciences

Resource Types: Yearbooks (full text), papers (metadata), conferences (metadata), projects (metadata), figures (profiles)

Entry Information: Chronicles, chapters, and charts, all sourced from yearbooks

Target Audience: Social science researchers, university faculty and students

Service Features: (I) **Core Content:** An online search and access knowledge service platform centered on social science yearbooks; (II) **Stitched Reading:** Provides stitched reading of up to four chapter search results in a single PDF; (III) **Search:** Includes secondary filtering, related institutions and scholars, and Baidu Baike association for search terms; (IV) **Personal Center:** Limited to favorites and followed search terms.

Summary: Full-text content is limited, but functionality is relatively complete with some operational capacity.

1.7 People’s Publishing House “Chinese Communist Party Ideological and Theoretical Resources Database”

URL: <http://read.ccpqh.com.cn/>

Coverage: Party building and Marxism-Leninism

Resource Types: Over 13,000 books

Entry Information: Books are structured by chapter, with over 70 million knowledge points extracted

Target Audience: Researchers in party building and Marxism-Leninism

Service Features: (I) **Comprehensive Collection:** Completely and systematically includes major works and documents of party ideology and theory, providing online search and access services; (II) **Navigation:** Provides category navigation browsing; (III) **Search:** Offers sentence, chapter, and book search with advanced options, though design has flaws; (IV) **Sub-databases:** Provides 14 sub-database services; (V) **Access:** Offers IP authentication and account login, but no open registration.

Summary: Primarily serves institutions with distinctive content and some operational capacity.

1.8 Chemical Industry Press “Chemical Knowledge Base Service Platform”

URL: <http://www.chem-know.com/index>

Coverage: Chemical industry

Resource Types: E-books, journals, standards

Entry Information: Books are processed by chapter, with structured content extracted for production processes and waste materials

Target Audience: Chemical industry researchers

Service Features: The platform maps a chemical industry knowledge graph and associates it with entries, journals, standards, and books, though association effectiveness is weak. Entries provide manual error correction feedback. It offers quick search, advanced search, secondary filtering, and related search term recommendations. Books and journals can be read and downloaded online, with favorites and reference management functions. Personal center services are limited to favorites and profile modifications.

Summary: Content requires further improvement, and knowledge graph association accuracy needs strengthening.

1.9 Petroleum Industry Press “Petroleum Encyclopedia, Drilling Knowledge Base, and Exploration Knowledge Base”

URL: <http://www.petropub.com/>

Coverage: Petrochemical industry

Resource Types: Standards, journals, yearbooks, books

Entry Information: Knowledge points extracted from books

Target Audience: Petroleum industry professionals

Service Features: Provides PC and app access with industry-specific classification systems and structured knowledge points, offering relatively complete functionality.

1.9.1 Petroleum Encyclopedia URL: <http://baike.yooso.com.cn/index.action>

Service Features: Provides an entry compilation system for user contributions, where users are both consumers and builders of the encyclopedia. Entries can include references, recommended books, and category information, published after review. Additional information such as view counts and edit counts is recorded.

1.9.2 Drilling Knowledge Base URL: <http://zuanjing.yooso.com.cn/>

Resource Types: Books, standards, journals

Entry Information: Knowledge points processed and extracted from books

Service Features: An online search and access service platform for drilling knowledge, featuring knowledge point extraction. Offers quick and advanced search with secondary filtering and related search terms, plus category navigation. Registration and login systems have issues.

1.9.3 Exploration Knowledge Base URL: <http://kantian.yooso.com.cn/>

Service Features: Primarily features training course content, with detail pages requiring permissions for access. Public courses date from 2016, and book detail pages also require permissions.

Summary: Content is limited and primarily targets institutional users. While individual users can register, they essentially cannot access content.

1.10 Intellectual Property Publishing House “DI Inspiro”

URL: <http://www.zlds.com/> (requires trial application and review for access)

Coverage: All disciplines

Resource Types: Patents, trademarks, legal documents, standards, over 2,000 scientific and technical journals

Entry Data: Biological sequences, chemical structures, citation literature, charts, etc., primarily sourced from patents

Target Audience: Intellectual property professionals

Service Features: An online search and access knowledge service platform for patents and trademarks. Offers 11 search methods, 256 searchable patent fields, and supports chemical structure and biological sequence data retrieval. Provides multiple patent classification browsing methods with pre-search capabilities. Supports custom field data export and full-text download. Includes patent statistical analysis with visual chart generation. Features a comprehensive personal center with patent alert functions for tracking status changes. Allows data import, indicator selection, and generation of custom analysis reports.

1.11 China Times Economic Publishing House “Audit Big Data Knowledge Base”

URL: <http://www.icnao.cn/>

Coverage: Auditing

Resource Types: 4,300 books and journals, 355,008 regulations, 4,696 articles, 1,170 training courseware, cases, dictionaries, and news items

Target Audience: Current and prospective auditing professionals

Service Features: An online search and access knowledge service platform for auditing knowledge.

2. Analysis of Knowledge Service Platforms

2.1 Content and Processing Depth

Traditional publishers’ knowledge service platforms generally integrate their own publishing resources, supplemented by encyclopedia and dictionary entries. Books typically undergo preliminary structural processing to create chapter catalogs, with some platforms extracting knowledge points such as FaXin Codes and knowledge units.

2.2 Functional Architecture

2.2.1 Classification Systems Nearly all platforms provide browsing via classification navigation systems. Some employ traditional systems like the Chinese Library Classification or industry classifications, while most have developed their own industry-specific taxonomies, such as FaXin’s legal outline, RenWei’s disease classification, and Chemical Industry Press’s knowledge graph. Regardless of presentation format, the essence is establishing a knowledge classification system and associating resources with it.

2.2.2 Search Functionality All platforms offer search capabilities, though functionality varies. Search response speed is generally required within 3 seconds. At minimum, platforms should provide quick search (direct keyword input like Baidu) and advanced search (limiting specific fields). Search scope should cover all platform resources’ metadata, entries, and full text (with options to select all or limit by resource type), ideally extending to synonyms and hyponyms at the 底层 level. Search results should support secondary filtering, with hit-term highlighting that ideally carries through to detail pages and full text. Further optimization could involve organizing search results by knowledge structure—for example, displaying disease-related results categorized by disease entries, drugs, cases, patient education, and doctor-patient communication.

Search optimization is endless and must address different scenarios: when users face specific problems, accuracy is paramount to deliver the most relevant content; when conducting literature reviews for new topics, recall becomes the primary metric.

2.2.3 Personal Center All platforms include personal centers, though functionality varies. Common features include profile management, favorites, subscriptions, and browsing/search history. Some also include recharge, order records, and data import/export functions.

2.2.4 Mobile Access Among the 12 sampled publisher knowledge service products, 7 provide app services. In the mobile internet era, mobile platform availability has become increasingly important.

2.2.5 Encyclopedia Entries Among the 12 sampled products, 6 provide encyclopedia entry services.

3. Recommendations for Knowledge Service Platform Construction

3.1 Content is Paramount

In the knowledge service era, content remains the core element. Regardless of product form, success is impossible without compelling content. Knowledge service content must be high-quality, unique, and continuously produced to form sustainable operational capacity. To become an industry leader, content must be irreplaceable.

In terms of presentation, content should be displayed structurally whenever possible, such as through book chapter catalogs, entry structures, and research conclusions of journal articles. Based on structural content, natural language processing technologies can extract key sentences from full texts to help users directly obtain needed information and data.

Copyright management is essential for publishers transitioning to digital publishing and online services. Most publishers only hold reproduction and distribution rights for publications, not necessarily the inherent information network transmission rights, broadcasting rights, or compilation rights. While copyright law does not specifically address fragmented processing rights (the closest being compilation rights—the right to compile works or fragments into new works through selection or arrangement), fragmentation processing itself does not create new works. The copyright risk thus hinges on whether publishers have permissions for online digital publishing and services. Proper copyright management not only eliminates legal concerns but also establishes a strong institutional image to attract high-quality authors and manuscripts.

If knowledge production, consumption, feedback, and reproduction can form a complete cycle on the platform, a basic ecosystem is essentially established.

3.2 Backend Management Functions

3.2.1 Knowledge Classification System The backend should provide functions for creating and managing knowledge classification systems, enabling the establishment of tree structures with three or more levels. Resources are associated with the classification system through search strategies or manual indexing, facilitating frontend data presentation.

3.2.2 Search Management Search response speed should generally be under 3 seconds. The system should support at least quick search and advanced search modes. Search scope must cover all resources' metadata, entries, and full text (with options to select all or specific types), ideally extending to synonyms and hyponyms. Results should support secondary filtering, with hit-term highlighting that carries through to detail pages. Advanced features could include knowledge-structured result organization.

3.2.3 Encyclopedia Entry Management Initial entry content can be obtained from Wikipedia, Baidu Baike, and other encyclopedias, supplemented by editors and certified users who can create, edit, and delete entries for review and publication. Entries should link to corresponding resources, with functionality referencing Baidu Baike.

3.2.4 Thesaurus Management Original thesaurus data can be sourced from open thesauri, establishing inter-term relationships and organizing them by category or associating them with classification systems.

3.2.5 Resource Management The system should support data import, secondary processing, indexing, and association by resource type, with permission controls determining visibility for different user groups (general logged-in users, members, separate paid content, etc.). Resource management provides content data for publishing and e-commerce platforms.

3.2.6 Sub-database Management The system should enable breaking resource type boundaries to reorganize resources by theme or classification for user services.

3.3 Frontend Functions

3.3.1 Personal Center The publishing platform must support registration, login, or IP-based login. Personal centers should provide profile management, resource favorites, subscription to publications or search queries, browsing/search history, and custom data export functions.

3.3.2 Copyright Management If publishers merely aim to integrate and manage internal resources, copyright management serves a supplementary role. However, for true digital publishing transformation and online service provision, copyright management is essential.

3.3.3 Mobile Adaptation Product publishing platforms must adapt to mobile display, including content search, access, and personal center functions, though backend management may be excluded.

3.3.4 Data Interfaces Interfaces must support data import/export, integrated search, secondary filtering, detail display, and full-text positioning.

3.3.5 User and Permission Management The backend should enable user freezing, deletion, creation, and grouping—such as by department and position for internal staff, and by member, regular user, institutional member, or institutional administrator for external users—with different permissions. It should also filter users by activity and contribution levels to facilitate management, offline event organization, and coupon distribution.

3.3.6 Content Editor A robust content editor is crucial for resource and encyclopedia management, especially for professional and educational publishing. Functions can reference the Baidu Baike editor.

3.3.7 Data Statistics **Content-based statistics** should track views, downloads, payments, and edits to support rankings, article recommendations, popular sections, and key resource analysis. **Search term statistics** should provide related and popular search term recommendations. **User-based statistics** should build user profiles and analyze behavior from login to logout to better understand users, providing recharge and consumption details. Advanced features could include annual consumption reports similar to e-commerce platforms for user re-engagement. The system should also monitor abnormal behavior such as malicious downloads and illegal scraping.

3.3.8 Citation Management Citation management is important for professional publishing, as book and journal influence largely depends on citation frequency in academic circles, providing publishers with influence data evidence within specific subjects. Calculation methods may include CiteScore (CS), Impact Factor (IF), and h-index. For trade and educational publishing, this function has limited significance.

3.4 Functional Architecture Recommendations

It is recommended to thoroughly understand publishers' business processes, designing workflows for resource 入库 and indexing according to business processes to ensure usability and facilitate internal task allocation.

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

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