

Information Resources Construction: Retrospect of the 13th Five-Year Plan and Prospect for the 14th Five-Year Plan (Postprint)

Authors: Xiao Ximing, Shi Qinggong, Liu Yi

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Abstract

[Purpose/Significance] This study systematically reviews and analyzes the representative achievements in both practical progress and theoretical research on information resource construction during China's 13th Five-Year Plan period, thereby comprehensively understanding the developmental status of practice and theoretical advances in this field, and providing references and insights for information resource construction research during the 14th Five-Year Plan period.

[Method/Process] Through web-based surveys, this study retrieved and systematically reviewed documents, laws, and reports on practical project achievements at various levels concerning information resource construction during the 13th Five-Year Plan period, thereby summarizing the current state of domestic practice in this domain. Based on academic papers themed "information resource construction" from three major databases (CNKI, Wanfang, and VIP), a mixed-methods approach combining qualitative and quantitative research was employed to statistically identify theoretical research hotspots, select core literature for in-depth analysis, and synthesize innovative perspectives as well as existing research gaps.

[Results/Conclusion] The findings indicate that during the 14th Five-Year Plan period, several trends will be reinforced in China's information resource construction practice and theoretical research: a strengthened user/reader-centered approach with emphasis on service efficiency; increased focus on emerging research topics within the context of societal digital transformation; more in-depth investigation into information resource co-construction and sharing platforms; and further exploration of risk assessment and mitigation strategies for new technology applications in information resource construction.

Full Text

Information Resources Construction: A Retrospective of the 13th Five-Year Plan and Prospects for the 14th Five-Year Plan

Xiao Ximing, Shi Qinggong, Liu Yi School of Information Management, Wuhan University, Wuhan 430072

Abstract: *[Purpose/Significance]* This paper reviews and analyzes the practical progress and representative theoretical achievements in information resources construction during the 13th Five-Year Plan period to understand the current state of practical development and theoretical research in China's information resources construction field, providing reference for research during the 14th Five-Year Plan period. *[Method/Process]* Through web surveys, we retrieved and sorted documents, laws, and reports on practical projects at various levels related to information resources construction during the 13th Five-Year Plan period to summarize the status of domestic practice. Based on papers on the theme of "information resources construction" collected in three academic databases—CNKI, Wanfang, and VIP—we employed a combination of qualitative and quantitative methods to statistically analyze research hotspots in this field, screened core literature on relevant topics for close reading, and summarized innovative viewpoints and existing research problems. *[Result/Conclusion]* The study concludes that during the 14th Five-Year Plan period, the user/reader-centered approach and the pursuit of service efficiency will be strengthened in both practice and theoretical research on information resources construction; new research topics on information resources construction in the context of social digital transformation will receive attention; research on information resources co-construction and sharing platforms will deepen; and risk assessment and avoidance issues in new technology applications in information resources construction will be further explored.

Keywords: Information Resources Construction; 13th Five-Year Plan; 14th Five-Year Plan

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The 13th Five-Year Plan period represents a critical phase for China to comprehensively build a moderately prosperous society and deepen reforms, as well as a decisive stage in advancing the construction of a socialist cultural powerhouse. The year 2020 marks both the conclusion of the 13th Five-Year Plan and the formulation of the 14th Five-Year Plan, serving as a crucial juncture for transitioning from building a moderately prosperous society to achieving the "Two Centenary Goals" of socialist modernization. Information resources construction constitutes an important component of China's socialist modernization, making it essential at this critical juncture to systematically summarize the achievements in both practice and theoretical research during the 13th

Five-Year Plan period while conducting forward-looking thinking and strategic planning for the 14th Five-Year Plan. Accordingly, this paper employs a combination of quantitative and qualitative methods to review the main progress in information resources construction practice during the 13th Five-Year Plan period, analyze the theoretical research hotspots and issues of this period, and explore development trends, with the aim of providing reference for the development and theoretical research of information resources construction during the 14th Five-Year Plan period.

1. Practice Areas of Information Resources Construction During the 13th Five-Year Plan Period

To demonstrate continuity and stage-specific differences in research on information resources construction practice, we conducted web searches of 28 central ministries, 34 provincial government websites, the National Library and 34 provincial public libraries, 42 double-first-class university library websites, Baidu News, and Sohu News, using the content scope and narrative style defined in the first two volumes of *Progress in Library Science Research* as references. Based on the retrieved data, compared with the 12th Five-Year Plan period, the 13th Five-Year Plan period's information resources construction practice prominently manifested in the following aspects:

1.1 Continuous Improvement of the Information Resources Construction System The information resources construction system has been continuously improved with the promulgation of a series of policy documents and laws. During the 13th Five-Year Plan period, key central-level documents related to information resources construction included the former Ministry of Culture's *13th Five-Year Plan for Public Digital Culture Construction* [1], the three-ministry *Management Measures for Opening and Sharing of National Major Scientific Research Infrastructure and Large-Scale Scientific Research Instruments* [2], the General Office of the State Council's *Management Measures for Scientific Data* [3], the Ministry of Culture and Tourism's *Implementation Plan for Integrated Innovation and Development of Public Digital Culture Projects* [4], and the 18-ministry joint *Action Plan for Intensifying Efforts to Remedy Weaknesses, Strengthen Weak Links, Improve Quality, and Promote the Formation of a Strong Domestic Market in Social Public Services* [5]. The 2016 *Public Cultural Service Guarantee Law of the People's Republic of China* contains multiple provisions offering macro-level guidance on resource construction issues in public cultural services [6]. The 2017 *Public Library Law of the People's Republic of China* includes numerous provisions regulating public library collection development, literature disposal, cataloging, resource disposal, and resource co-construction and sharing [7]. Additionally, some provinces have issued regional information resources construction documents, such as Guangzhou's *Regulations on the Weeding of Public Library Document and Information Resources* [8]. At the industry level, the Chinese Academy of Sciences issued the national standard *Information Technology—Scientific Data Citation* in 2018 [9], and the *Digital*

Library Resource Management Guidelines drafted by the National Science Library of the Chinese Academy of Sciences were reviewed and approved at the 20th meeting in Beijing in December 2019, filed with the Public Service Department of the Ministry of Culture and Tourism, and officially released in 2020 [10].

1.2 Rapid Development of National Scientific Data Information Resource Sharing Platforms The Ministry of Science and Technology and the Ministry of Finance successively supported the establishment of national science and technology resource sharing service platforms in eight fields including basic science, agriculture, forestry, oceanography, meteorology, seismology, earth system science, and population and health, gradually forming a batch of scientific data centers with obvious resource advantages. This platform construction developed rapidly during the 13th Five-Year Plan period, especially after the promulgation of the *Management Measures for Scientific Data* in 2018. By June 2019, China had established 50 national science and technology resource sharing service platforms (including 20 national scientific data centers and 30 national bioresource and experimental material repositories) [11], launched the China Science and Technology Resource Sharing Network, and achieved national navigation and retrieval of scientific and technological resources, while provincial governments also successively established provincial science and technology information resource sharing platforms. Scientific data sharing platforms in relevant fields have continued to emerge and improve, with massive data volumes and continuously rising visits. As of June 2020, the National Marine Science Data Center had loaded 161 datasets totaling 1,765.76 GB, covering 10 major disciplinary fields, with a time span from 1662 to the present and spatial coverage of global sea areas [12].

1.3 Improved Layout of National Cultural Information Resource Sharing Infrastructure During the 13th Five-Year Plan period, China built cultural facility networks covering both urban and rural areas. By the end of 2019, there were 3,196 public libraries nationwide with total collections of 1.11781 billion volumes, 901.35 million total circulation visits, 613.73 million volumes loaned, and 195,732 activities organized for readers with 117.86 million participants. There were 44,073 mass cultural institutions and 33,530 township comprehensive cultural stations, which organized 2.4511 million cultural activities serving 787.16 million visits [13]. The digital library promotion project achieved remarkable results, with a nationwide digital library network system covering public libraries fully connected. The project covers 41 provincial libraries and 486 prefecture-level libraries, serving over 2,900 county-level libraries, with shared digital resources totaling 45,529.6 TB and 563 business platforms at various levels achieving interconnectivity [14]. By the end of 2019, public libraries had 865.57 million e-books, 225,800 computers (including 145,700 e-reading terminals for readers), and the public digital culture project had accumulated approximately 1,200 TB of public digital cultural resources [15].

The national public cultural cloud platform construction achieved initial results. In 2017, the Ministry of Culture launched a key laboratory for big data applications in public cultural services, integrating national public digital cultural resources and services. Users can access shared live broadcasts, resource on-demand services, activity reservations, venue navigation, service ordering, special applications, and big data analysis through computers, mobile apps, WeChat, and public cultural all-in-one machines [16]. Currently, 34 provincial sub-centers, 333 prefecture-level branch centers, 2,843 county-level branch centers, and 32,179 township-level grassroots service points have been established, with 700,000 village (community) grassroots service points co-built with the National Modern Distance Education Network for Party Members and Cadres of the Organization Department [17].

The Border Digital Culture Corridor Construction Project was fully launched. Beginning in 2016, digital cultural service terminal configuration standards were upgraded for 1,050 township grassroots service points and 9,086 digital cultural stations in 11 coastal and border provinces, providing over 6,000 video resources totaling 2,300 hours and premium resource databases including the “Voice of the Heart” audio library, public aesthetic education gallery, and community cultural life gallery, with total resources approaching 5,200 GB and total visits to the cultural sharing project column reaching 3.16 million users and 30.35 million page views [18]. By September 2019, upgrades had been completed for 2,778 township grassroots service points and 12,412 digital cultural stations, with continuously enriched content [19].

Additionally, in 2016, Shanghai Library used linked data technology to open its genealogy resources and interfaces, building an open data platform for digital humanities projects and successively releasing various terminologies, authority files, and bibliographic data [20]. In 2017, the Ministry of Culture promoted the integrated development of public digital cultural services for military-civilian fusion, providing “on-demand” digital cultural services for officers and soldiers [21]. In 2019, the National Digital Library app won the title of online positive energy model [22].

1.5 Steady Development of Information Resources Co-construction and Sharing Projects During the 13th Five-Year Plan period, information resources co-construction and sharing in universities and research institutions developed rapidly. In 2019, the third phase of the China Academic Library & Information System (CALIS) was fully completed, and exploration of CALIS’s new-generation library service platform construction and services gradually unfolded. The China Academic Digital Associative Library (CADAL) developed steadily with continuously improved platform construction. To date, it has reached 2.68 million resources with 753 co-construction and sharing institutions. In 2019 alone, 247 new member institutions were added, and nearly 35,000 items (volumes) of Manchurian Railway, seal images, German, and Russian literature were added to the collection [23].

By the end of 2019, the China Academic Humanities and Social Sciences Library (CASHL) had collected 58,000 types of foreign-language print journals, 3.25 million foreign-language print books, 130,000 e-journals, 1.07 million e-books, and 236 types of large special collection documents. The CASHL platform also integrates Republican-period journals, ancient documents from universities, the National Philosophy and Social Sciences Academic Journal Database, 225 globally open-access databases, over 900 humanities and social sciences databases from CASHL central libraries, and 24 databases purchased with CASHL funding. Based on CASHL's unique and integrated resources, it provides one-stop search, interlibrary loan, document delivery, proxy search, online academic lectures, and new media reading promotion services [24].

The National Science and Technology Library (NSTL) information resources co-construction and sharing project developed steadily. Currently, NSTL includes 96.908476 million literature records covering journals, conferences, reports, books, standards, dissertations, and patents. Foreign backfile databases, foreign current journal databases, open-access resource databases, foreign science and technology databases, and jointly purchased foreign databases continue to expand. With the network service system as its core, NSTL has cooperated with local and industry science and technology information institutions to establish a nationwide science and technology literature information service system. As of April 2020, NSTL had established 40 service stations covering 29 provinces, municipalities, and autonomous regions, creating convenient conditions for national users to more fully utilize the center's science and technology literature information resources [25].

1.6 Initial Achievements in Digital Humanities Supporting Library Special Resource Construction Digital humanities is closely connected with library information resources construction, particularly special database construction. As the main repository of historical documents, the library industry has become the earliest infrastructure builder for digital humanities alongside digital library construction, while traditional textual criticism and modern bibliometrics provide methodological references for digital humanities as an interdisciplinary research field [26]. In practice, digital humanities has achieved initial results in library special resource construction. Beyond commercial databases like *Siku Quanshu* and *Zhongguo Jiben Gujiku*, important Chinese ancient book digitization projects include the National Library's "China Memory" and "Chinese Memory" digital humanities projects, Shanghai Library's full-text databases of late Qing periodicals (1833-1911) and Republican periodicals (1911-1949), and Shanghai Library's "Digital Humanities Open Data Platform," which publicly releases various research materials used in its digital humanities projects to the internet via linked data [27].

2. Research Hotspots in Information Resources Construction During the 13th Five-Year Plan Period

2.1 Statistical Analysis of Research Hotspot Topics Using three academic databases—CNKI, Wanfang Data Knowledge Service Platform, and VIP—as sources, we retrieved CSSCI papers published between January 1, 2016, and September 30, 2020, on information resources construction. After eliminating duplicate and report-style literature, we obtained 2,671 thematic papers as our research sample. To more clearly analyze the topic distribution and research trends in Chinese journal papers, we formatted the retrieval results and, using CiteSpace 5.5 software, statistically summarized keywords with frequency greater than 20, creating a keyword table for the domestic information resources construction field during the 13th Five-Year Plan period, as shown in Table 1 .

Table 1. Keyword Statistics in Domestic Information Resources Construction Field During the 13th Five-Year Plan Period

Based on Table 1 and comparing it with research progress during the 12th Five-Year Plan period [28], we find that domestic information resources construction research during the 13th Five-Year Plan period continued to deepen vertically in knowledge services, think tank construction, big data, co-construction and sharing, libraries, and public cultural services. After merging upper and lower-level concepts and coordinate concepts in Table 1, and through in-depth reading of literature containing these concepts, we find that 13th Five-Year Plan information resources construction theory centered on two elements—“knowledge services” and “new technologies”—with horizontally expanded research scope, closer integration with national strategies such as think tank construction, scientific data, the Belt and Road Initiative, and public digital cultural services. Information resource integration, information resource sharing, resource guarantee system construction, data resource construction, and special literature resource construction became prominent hotspots.

2.2 Analysis of Thematic Hotspots

2.2.1 Think Tank Resource Construction Serving National Development Strategies Under the “Double First-Class” background, university library resource construction faces transformation, and aligning with the specific construction goals of first-class universities and first-class disciplines has become a top priority for library information resources construction [29]. Focusing on think tank resource construction, achieving coordinated development of digital and paper resources, deeply developing network information resources, and carrying out scientific data management services have become alternative paths for resource construction transformation [30]. Research on thematic information resources construction under the Belt and Road Initiative has gradually deepened, focusing on investigating macro information needs of countries along the route, multi-language information needs in specialized fields, and multi-language, in-

terdisciplinary academic resources and scientific research information [31]; analyzing national news reports and public opinion information; establishing and improving resource co-construction and sharing alliance mechanisms; and emphasizing heterogeneity [32]. University libraries participating in think tank construction and serving scientific research are new requirements for university libraries in the new era and the main direction for university libraries to innovate services and find new growth points. Taking basic resource needs as the entry point, conducting heterogeneous resource construction, building collaborative innovation and guarantee mechanisms between library and information institutions and think tanks, and promoting integrated platform construction for information resources construction have become research hotspots [33].

2.2.2 Increased Attention to Data Resource Construction Data resource construction has become a research hotspot. Research on legal and ethical issues involving big data in information resources construction has further deepened, with information anonymization technology, data confidentiality technology, firewall technology, and data refinement technology becoming important breakthroughs for data security protection and avoiding personal privacy leakage [34]. Scientific data has attracted widespread attention, with scholars from different disciplines conducting macro research on scientific data resource management, sharing concepts, and policy systems. Research achievements have continuously emerged on library humanities and social sciences data management [35] and university library scientific data management plan service frameworks [36]. Studies on foreign scientific data management and service practice cases have increased. In comparison, domestic scientific data resource construction still faces widespread problems such as weak awareness, insufficient content, and lack of sharing platforms, which have attracted attention [37].

2.2.3 Integration of New Technologies into Information Resource Sharing Research Research on the application of new technologies in information resource sharing has further deepened. Research on cloud technology and library information resources construction has extended to academic information resource security guarantee, national digital academic information resource guarantee, and coordination mechanisms between cloud technology and public digital cultural services. With the development of digital library consortia, information resource security sharing has received increasing attention and intersected with blockchain technology. Research on open access resource construction and management in blockchain environments has received increasing attention. Meanwhile, virtual reality technology application in library information resources three-dimensional construction and service innovation, and internet-plus university information resources open sharing mechanism construction have diversified specific theories. Additionally, as the core of the national cultural information resource sharing project, rural cultural information resource sharing project construction from the perspective of equalization of cultural services in different regions has attracted attention.

Problems such as rural information resource construction content failing to effectively meet user needs and lagging website construction are prominent, requiring integration and coordination at the supply entity, supervision mechanism, and information processing levels to effectively promote the project [38].

2.2.4 Research on Public Digital Cultural Resource Integration Information resource integration remains a research focus in the information resources construction field. Research results on the necessity, collaborative paths, and construction models of information resource collaborative construction have become increasingly abundant. Research on integration of public digital cultural resources among libraries, museums, cultural centers, and art galleries has become a continuous hotspot. Based on systems theory, the path and model design for digital resource integration among libraries, archives, and museums (LAM) have been continuously improved, with integration principles such as cooperation and sharing, mutual benefit and win-win results, quality and efficiency consideration, dynamic adjustment, overall coordination, and step-by-step progress being further clarified. Integration content has expanded to digital resource preservation, cooperative development of digital resource integration technology, and cooperative construction of digital resource sharing and service platforms [39]. Additionally, at the micro level, controlled vocabularies and new technology achievements have begun to be used to optimize the public digital cultural resource integration process [40].

2.2.5 Research on Special Resource Database Construction The construction 思路 and process of the National Digital Library's special resource cloud platform theoretically provide good references for special resource construction in provincial public libraries. According to our investigation, during the 13th Five-Year Plan period, 34 provincial-level public libraries in China built and improved 533 special resource databases. Research on special resource database construction has deepened vertically in database metadata organization, retrieval algorithms, and overall platform optimization while horizontally expanding content and intersecting with digital humanities theory. Taking seal image resources as the application object, the "Seal Knowledge Center" digital humanities image resource integration and knowledge discovery solution theoretically addresses the problem of extremely low utilization rates of image resources containing massive amounts of information in digital humanities research that cannot be effectively shared and reused across heterogeneous databases and different applications [41]. Shanghai Library's special genealogy collection, based on the original digital humanities platform providing basic query and association functions, has developed functions for uploading genealogies, online genealogy recognition, and online genealogy editing, attempting to introduce crowdsourcing models to continuously optimize the system and actively interact and cooperate with user communities, making users not only data consumers but also platform resource contributors [42].

2.2.6 Research on Literature Resource Construction Models and Related System Construction

Patron-Driven Acquisitions (PDA) has received continuous attention, with theoretical innovation focusing on PDA model innovation, factors influencing PDA implementation, PDA local adaptability, protection of readers' rights in library recommendation services, and optimization of this model's practical paths [43]. In the "Internet+" environment, building a one-stop management platform for book procurement based on reader experience, deeply expanding the supply chain system, and optimizing procurement procedures have become breakthrough paths for public libraries to innovate PDA [44].

Research on legal deposit and literature information disposal systems has continuously deepened. Guaranteeing through legislation the right of national and public libraries to accept publication deposits (submission) to ensure complete collection of domestically produced literature information resources has been incorporated into the *Public Library Law*. Meanwhile, establishing and improving public library literature information disposal systems, developing literature information disposal (weeding) standards, establishing joint preservation mechanisms for low-use literature, and building national literature strategic reserve repositories have been incorporated into national development strategic planning and have received attention [45].

Research on open publishing and its impact on library resource construction has continued to deepen. In the open publishing environment, libraries must enhance their understanding of open access publishing, make reserves in talent, technology, and knowledge research, and attach importance to strengthening cooperation among libraries [46]. Library institutions and publishing institutions must clarify their positions in the academic chain, handle competition and cooperation relationships, have the courage to change traditional business models, and seek new development through competition and cooperation [47]. Libraries urgently need to explore business process reengineering, open policy formulation and promotion, and open knowledge systems in the open environment to create their own open publishing resource construction and services [48]. Meanwhile, whether and how to fund authors to pay open publishing APCs has become the focus of scientific research information policy [49].

The reconstruction of the literature information resource guarantee system has triggered in-depth discussion. In 2019, the National Social Science Fund major project "Research on the Reconstruction of China's Literature Information Resource Guarantee System in the New Era" was successfully launched. Issues such as the lack of quality evaluation of humanities and social science books, insufficient peer evaluation, and mismatch between evaluation index systems and evaluation purposes have attracted attention, with the "full evaluation" system and its preliminary scheme centered on the academic book quality evaluation index system framework being constructed [50]. The call for humanism in academic work evaluation system construction in the big data and artificial intelligence era has also grown stronger [51].

3. Problems in China's Information Resources Construction During the 13th Five-Year Plan Period

3.1 Deficiencies in Theoretical Research on Information Resources Construction

3.1.1 Ineffective Combination Between Theoretical Research and Practice Information resources construction theory cannot yet fully and timely interact with relevant disciplines and career development. Emerging industry problems and practical issues have not been comprehensively summarized and deepened theoretically in a timely manner, making it difficult for theory to meet practical requirements. For example, at the macro level, bottlenecks in public digital cultural resource co-construction and sharing platforms caused by unbalanced regional economic development and technical issues have been encountered, but systematic theoretical research with clear guiding significance is obviously lacking, which further affects practice. At the micro level, practical problems in public library special database construction such as redundant construction, financial guarantee, social participation, and special information resource property rights urgently need solutions, but relevant theoretical research is missing or not strongly guiding.

3.1.2 Insufficient Depth and Continuity in Theoretical Research For example, research on new technology applications and information resources construction mostly involves simple introductions to technology principles, characteristics, and application ideas in resource construction, with little involvement in actual application scenarios or in-depth research on applying emerging technologies to specific problems. Research on various technology applications has relatively ignored issues such as risks and standards. Moreover, some research results actually hype new concepts or technologies, intuitively pursuing research novelty, lacking scientific consideration of the practical applicability of new concepts and technologies to information resources construction practice, and lacking continuous and in-depth discussion on user usage and platform service actual effectiveness in the process of applying new technologies to information resources construction. Whether information resources construction theoretical research should be “technology-dominated” or “pluralistically dominated” balancing user experience and service efficiency urgently needs to be resolved at the theoretical level.

3.1.3 Shortage of High-Quality Theoretical Research on “Data,” Especially Scientific Data Resource Construction Scientific data is an important asset and resource generated in scientific research and an important foundation for continuous or collaborative research. In the big data environment, the volume of data generated by research activities has grown dramatically, and the cost and difficulty of scientific research have continuously increased, posing new challenges to scientific data management in information resources construction, especially in academic libraries. As shown in Table 1, scholars in

various fields have shown high attention to “data” during the 13th Five-Year Plan period. There were 149 research results on scientific data management in CSSCI-indexed journals during the 13th Five-Year Plan period, of which only 63 were from library and information science, but scientific answers to platform construction, open services, data management, and intellectual property issues in scientific data resource construction are lacking, with few achievements having high practical guiding significance.

3.2 Prominent Practical Problems in Information Resources Construction During the 13th Five-Year Plan Period

3.2.1 Insufficient Depth of Sharing in Information Resources Platform Construction This is mainly manifested in three aspects: First, the quantity and quality of resources shared on some provincial information resource sharing platforms urgently need improvement. Although websites are named “Information Resource Sharing Service Platforms,” they only provide scientific and technological literature information. Some provinces publicly disclose much scientific and technological information on their official websites but fail to integrate it into one platform, creating obstacles for users and hindering information resource effectiveness. Additionally, information resource sharing platforms provide many invalid links and are not updated timely. Second, information resource descriptions are not unified. Although the Ministry of Science and Technology and the Standardization Administration have jointly established the National Technical Committee for Standardization of Science and Technology Platforms to organize standardization work and have released the national standard *Core Metadata for Science and Technology Platform Services* [52], website names vary considerably, causing difficulties for users. Non-uniform metadata descriptions of information resource content create serious inconvenience for various resource integrations. Third, at the provincial platform level, most platforms have not fully integrated existing and already open scientific and technological information resources within their provinces [52].

3.2.2 Multiple Problems in Library Special Data Resource Construction In public libraries, special database resource content is incomplete, with some databases having insufficient content and small data volumes; update frequency is low, with over 90% of databases not being updated within one year; some databases contain too much professional jargon, preventing users from accessing and using them; most special databases lack database introductions; some databases have poor validity and usability through web access; some libraries construct databases based entirely on resource characteristics rather than being user-oriented, resulting in low database utilization; only a small portion of special databases from provincial public libraries can be shared through the “National Cultural Information Resource Sharing Project,” with overall sharing degree needing improvement; data processing and cataloging standards vary among libraries, preventing full revelation of resource relationships; most spe-

cial databases lack content descriptions and usage instructions, and operation interfaces are not user-friendly; some databases even lack search functions, only allowing simple browsing; regarding search approaches, although keywords, titles, and other methods are provided, there is no guidance on search formulation construction or secondary search functions, resulting in low user recall and precision rates. Additionally, self-built special databases at various local levels have uneven construction quality, with non-standardized operation procedures and topic selection, lacking complete and rigorous demonstration in topic selection and relying mostly on librarians' work experience and subjective assumptions. Some topics cannot accurately meet the requirements of highlighting local characteristics, resulting in incomplete database content; there is redundant construction among databases; and in terms of data source quality, there is a lack of strict screening, with database content being 庞大、冗余 and data sources being relatively 单一 [53].

In university libraries, special resource construction commonly suffers from problems such as lack of independent special resource columns and inconsistent special resource names [54]. Issues in special collection database construction in university libraries in ethnic minority areas are more prominent, such as working in isolation, low database quality, lack of resource integration and sharing, incomplete databases, and uneven usability and accessibility of digital achievements [55].

3.2.3 Immature Application of Cutting-Edge Support Technologies in Library Information Resources Construction Although domestic digital humanities projects and related practices have attracted some attention, practical cases mainly concentrate in research institutions or humanities fields. Relatively few libraries apply digital humanities-related technologies to special collection resource construction. Most libraries only provide simple scanning or database construction for user retrieval and utilization, with only a 极少数 libraries integrating digital humanities concepts into special collection digitization construction, using digital humanities-related technologies to deeply mine data and knowledge in databases and provide analysis and research through visualization. Additionally, relevant surveys show that the library system is not familiar with digital humanities concepts and related technologies, and libraries lack librarians who understand both digital humanities technology and humanities scholars' research needs. Some libraries have plans for applying digital humanities-related technologies in special collection resource construction but have not yet formulated relatively mature specific schemes [56].

3.2.4 Weak Public Sense of Gain from Information Resources Construction Since the 13th Five-Year Plan period, although China's information resources construction system has continuously improved, national scientific data information resource sharing platforms have rapidly developed, the national cultural information resource sharing infrastructure layout has become more complete, national-level digital cultural resource sharing projects have

achieved remarkable results, and information resources co-construction and sharing projects have developed steadily, with continuous expansion in quantity or coverage, the public's feedback or satisfaction with information resources construction is not obvious. In public information resources platform construction, the consciousness of "construction for construction's sake" occasionally emerges, neglecting user needs and construction priorities, failing to provide effective information for users, let alone high-quality information services for regional development.

4. Priority Areas for Theoretical Research and Practice in Information Resources Construction During the 14th Five-Year Plan Period

Based on the practical progress, theoretical research status, and existing problems in information resources construction during the 13th Five-Year Plan period, we believe that priority research areas during the 14th Five-Year Plan period should focus on the following four aspects:

4.1 Strengthening the User/Reader-Centered Approach and Pursuit of Service Efficiency

The inherent value of information resources construction lies in serving users. Research in the information resources construction field tends to closely connect with social development and keep pace with the times, strengthening deep integration with emerging technologies. While serving national development strategies, it will better provide services that meet the needs of a broader range of users. User experience, smart services, user needs, information seeking behavior, sentiment analysis, privacy protection, and information security will further deepen along the research trajectory of the 13th Five-Year Plan period. Additionally, affected by the pandemic, national fiscal budgets have been reduced, further increasing the weight of service efficiency in information resources construction. Information resources construction quality, information resources service platform efficiency evaluation, database redundant construction issues, information resource organization retrieval and content presentation, and the literature guarantee system in public library collection resource construction will become research hotspots as a series of projects advance. In the process of pursuing improved service efficiency, the balance between technology and humanities and the satisfaction of users' legitimate information rights need to be properly resolved. Therefore, we predict that while the user-centered value orientation will further deepen, research on intensive information resources construction will become a trend, and high-quality literature resource guarantee systems will be constructed multi-dimensionally at the theoretical level.

4.2 "Data" Will Continue to Be an Important Content in Information Resources Construction Research

Through the review of theoretical and practical research on information resources construction during the 13th Five-Year Plan period, we can find that the theme words "data" and "scientific data" have frequently appeared in recent years. European and American

university libraries have many successful practices in scientific data management. In China, Wuhan University Library, Fudan University Library, Peking University Library, and Shanghai International Studies University Library have also launched scientific data management services. Therefore, at the theoretical level, issues such as the authority and comprehensiveness of scientific database content, the efficiency of sharing platform services, and the sustainability of literature information resource guarantee systems urgently need to be resolved, forming a broader theoretical research boundary and content around “data.”

4.3 Further Increase in Research Heat on Information Resources Co-construction and Sharing Platforms Building an information resources guarantee system for the entire society is an inevitable trend, and the widespread application of digital environments and internet technologies provides a more efficient and convenient path for this trend—co-construction and sharing platforms. During the 13th Five-Year Plan period, national and regional-level information resources co-construction and sharing platforms expanded their benefit coverage and accumulated relatively rich construction experience. Building an information resources guarantee system benefiting all citizens and improving resource co-construction and sharing platforms have become the foundation and key to promoting equalization of public cultural services and the cultural powerhouse strategy. Therefore, we can predict that during the 14th Five-Year Plan period, platform research and system research related to resource construction sharing and co-construction will only increase, especially regarding construction paths and optimization of public information resources platforms in county-level libraries, rural areas, ethnic minority areas, and remote areas, and will likely generate macro-level institutional and institutional system designs for information resources co-construction and sharing at the theoretical level, promoting institutionalized construction of information resources co-construction and sharing platforms. In broader social fields, people will further focus on how to build a social information resources guarantee system covering government information resources, enterprise information resources, and public domain information resources to achieve sharing of information resources across the entire society.

4.4 Risk Assessment and Avoidance Issues in New Technology Applications Will Receive Attention During the 13th Five-Year Plan period, the profound impact of new technologies on theoretical research and practical development in information resources construction has become clearly visible. Technology has always been one of the core elements affecting information resources construction research. Big data, cloud technology, “Internet+”, blockchain, virtual reality technology, artificial intelligence, 5G, and others are increasingly widely applied in the information resources construction field. The cross-coupling and conflicts in technology application processes will also bring unpredictable risks and ethical crises to information resources construction in new technology cross-application environments. Therefore, risk assessment and avoidance in new technology applications will also become important topics

in theoretical research. Intelligent and precise collaboration mechanisms for technology-based information resources construction, user privacy protection mechanisms, technology application risk assessment mechanisms, optimization paths, and specific technologies such as GIS technology optimization, authority control, text mining, word extraction technology, and linked data technology in special information resources construction processes will receive special attention.

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

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