The Superimposed Effect of "Policy Push + Technological Revolution" on the Development of Academic Libraries: Postprint

Authors: Li Donghong, Hu Ying, Yang Wenhui

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Abstract

[Purpose/Significance] To analyze and comprehend the essence, characteristics, and manifestations of the superimposed impacts of the "Double First-Class" policy impetus and technological revolution development on university libraries, propose targeted countermeasures and recommendations, construct a framework for resources, environmental spaces, services, and management systems for university libraries under the new circumstances, and foster the positive development of superposition effects. [Method/Process] This study introduces superposition effect theory to define the concept of superposition effects in "Double First-Class" university libraries, subsequently analyzes the specific influences and characteristics of "policy impetus + technological revolution" on university library development, and models the superposition effect influence mechanism diagram. [Results/Conclusion] The composite nature of university libraries' own functions and attributes constitutes the foundation for superposition effects to function effectively. Based on comprehending the essence and operational mechanisms of superposition effects, this enables discipline-centered, first-class innovations in resources, services, and management for university libraries.

Full Text

Preamble

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The Superposition Effect of "Policy Promotion + Scientific and Technological Revolution" on the Development of University Libraries

Li Donghong[1],[2], Hu Ying[2], Yang Wenhui[2]
[1] Institute of Ethnic Studies, Dali University, Dali 671000

[2] Yunnan University Library, Kunming 650091

Abstract

[**Purpose/Significance**] This study analyzes and grasps the essence, characteristics, and manifestations of the superimposed influence of the "Double First-Class" policy promotion and scientific and technological revolution on university libraries. It proposes targeted countermeasures and suggestions to construct a new framework for library resources, environmental space, services, and management systems under these new conditions, thereby promoting the positive development of superposition effects.

[**Method/Process**] By introducing superposition effect theory from systems science, this paper defines the concept of superposition effect in the context of "Double First-Class" university libraries, analyzes the specific impacts and characteristics of "policy promotion + scientific and technological revolution" on library development, and models the influence mechanism of this superposition effect.

[**Result/Conclusion**] The complexity of university libraries' functions and attributes forms the foundation for superposition effects to function effectively. Based on understanding the essence and mechanism of superposition effects, university libraries can achieve subject-centered, first-class innovations in resources, services, and management.

Keywords: Policy Promotion; Scientific and Technological Revolution; Double First-Class; University Libraries; Superposition Effect
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Globalization and the scientific and technological revolution have guided rapid development in science and information technology, placing university libraries —as the information heart of higher education institutions—amidst tremendous environmental changes. Simultaneously, China's economy has shifted from high-speed growth to high-quality development. Against this backdrop, the strategic initiative of "Double First-Class" construction in higher education has emerged, profoundly transforming China's higher education landscape. In recent years, research on "Double First-Class" university library development has continuously emerged, focusing primarily on: library resource optimization; disciplinary services, service innovation, and team building; and transformation of library functional positioning. Xiao Ximing and Yin Yanli [1] proposed constructing precise services through in-depth disciplinary analysis based on an analysis of university library resource characteristics. Tu Wenbo [2] analyzed how "Double First-Class" university libraries can achieve sustainable development in new environments from three dimensions: disciplinary evaluation, disciplinary intelligence, and disciplinary alliances. Huang Na and Tan Liang [3] discussed the role positioning of university libraries under the "Double First-Class" background and proposed specific approaches for library role transformation from

decision-making, construction participation, talent evaluation, and disciplinary development perspectives. Existing research on "Double First-Class" libraries has primarily focused on background analysis and specific resource and service construction studies, while lacking in-depth and specialized analysis of the complexity of the "Double First-Class" library construction environment. Research on the superposition effect of "policy promotion + scientific and technological revolution" has not yet been conducted. Currently, the superposition effect and influence generated by the rapid development of international scientific and technological information and domestic policy promotion differ from the past in scope, form, quality, and depth. As an essential component of higher education, university libraries face enormous opportunities and challenges under the "Double First-Class" policy, institutional guarantees, and the new technological environment. This paper introduces the concept of superposition effect into the study of university library construction and development, analyzes the environmental impacts and problems in their own development, actively considers the integration of libraries with the overall environment and the openness of the system, and strives to achieve positive, multiplying influences of superposition effects through promoting the coordinated development of library management, resources, and service awareness. This represents an important issue that "Double First-Class" university libraries need to consider and resolve at this stage.

1 Concept and Connotation of Superposition Effect

1.1 Concept of Superposition Effect

The superposition effect studied in this paper originates from systems science. When applied to theoretical research on 事物发展 (the development of things), it has not yet been strictly defined. Generally, it can be considered that when one event is beneficial to a subject and another event is also beneficial, a third event that was originally unfavorable may become beneficial due to the positive effects of the first two events. Conversely, if the first two events are unfavorable to the subject, a third event that was originally favorable may become unfavorable due to their negative influences, thereby creating a superposition effect, also known as an amplification effect. In terms of content and attributes, superposition effects include homogeneous superposition and heterogeneous superposition, presenting both vertical simplicity and multi-dimensional comprehensive effects. The outcomes are influenced by different factors and can exhibit positive, negative, or composite changes. Superposition effects reflect the relationship between a subject and external intervening or connected objects. The so-called favorable or unfavorable effects are not simple linear transformations but systematic change processes that interact with the environment.

1.2 Connotation Analysis of Superposition Effect

From the above concept, superposition effect reflects the relationship between a subject and its environment or other 事物 (things) through the manner of superposition. The superposition subject is regarded as a structurally ordered and

synergistically developing system, with its main ideas originating from systems science, particularly "systems theory" and "synergetics."

Systems thinking has a long history, but systems theory as a science is widely recognized as having been founded by the Austrian-American theoretical biologist L.V. Bertalanffy. In 1932, he published "Antibody Systems Theory," proposing systems theory ideas. "Systems theory studies the structure, characteristics, behavior, dynamics, principles, and laws of systems, as well as the connections between systems. The basic idea of systems theory is to treat the object of study and handling as an integral system. The main task of systems theory is to take the system as its object, start from the whole to study the relationship between the system as a whole and its constituent elements, and essentially explain its structure, function, behavior, and dynamics to grasp the whole system and achieve optimal goals" [4]. Systems emphasize the organic connections between the whole and its parts, between parts themselves, and between the whole and its external environment, possessing three basic characteristics: wholeness, dynamics, and purposefulness [5]. The renowned physicist Haken established "synergetics" in the 1970s. "Its central 议题 (topic) is to study what kind of mutual synergistic effects among subsystems within a system can produce ordered structures in time, space, and function at the macroscopic scale. Of course, this system must be an open system far from equilibrium. Synergistic action is the internal driving force for the emergence of ordered structures in a system. For a complex system, when external energy acts upon it or material exchange reaches a certain critical value, subsystems may produce synergistic effects, and the system changes from disorder to order, generating some stable structure from chaos" [6].

Thus, the research object of superposition effect theory is a composite system in a changing environment, characterized by synergy and openness. The development and changes are holistic rather than linear. "Double First-Class" university libraries are systems with complete organizational structures, and the impact of composite environmental changes on them is the manifestation process of superposition effects. The connectivity and homogeneity of subjects make them suitable for superposition effect theoretical research.

1.3 Definition of Superposition Effect for "Double First-Class" University Libraries

The complexity of university libraries' functions and attributes is the foundation for superposition effects to function effectively. First, the library is a collection and connection point for university resources and information, externally reflecting the physical connection of scientific and technological research information, and internally filtering, screening, analyzing, classifying, and transforming external massive information according to specific school development directions to provide it to readers. Its functions themselves have composite characteristics. In terms of attributes, it is a comprehensive organizational system where internal components interact and synergistically promote library construction and

development. The library also has its own environment, including various organizational entities within the school that interact with it and various external related entities and information spaces, all of which can be called the library' s environment. Based on systems science theories, the superposition effect of "Double First-Class" university libraries can be defined as: library superposition effect is a nonlinear superposition effect with internal dynamic mechanisms in an open system.

What "Double First-Class" university libraries currently face is precisely the superimposed influence of the rapid development of global scientific and technological revolution and the "Double First-Class" construction policy promotion in higher education. The impact of the "Double First-Class" policy on university libraries is a comprehensive positive superposition. The scientific and technological environment is an objective environment that exists as an open composite system, and the library itself needs to become an open system to form adaptive integration with the environment through internal dynamic mechanisms. Based on this analysis, from the perspective of superposition attributes, the superposition of "policy promotion + scientific and technological revolution" should belong to composite superposition, with the superposition effect presenting three-dimensional integration and composite influence effects.

2 Impact of Superposition Effect on "Double First-Class" Libraries

The superposition of "policy promotion + scientific and technological revolution" is the core influence on the development of "Double First-Class" university libraries. The changes in the information environment produced by the scientific and technological revolution constitute the material, i.e., systematic changes in structural space, while policy support provides positive directional guidance. The realization of superposition is a process of integrated development of library functions, resources, space, and services.

2.1 Impact of "Policy Promotion + Scientific and Technological Revolution" on Library Function Positioning

2.1.1 Staged Analysis of "Policy Promotion" Impact on University Library Development "Policy promotion" provides direction and guidance from consciousness to practice. The scope of "policy promotion" discussed in this paper refers to higher education policies. Due to their functions and attributes, university libraries are relatively sensitive to the implementation of national policies promoting higher education development, with obvious benefits. Their development process can be divided into the following stages:

First Stage: Initial Library Construction Stage. After the founding of New China, "Revitalizing the Nation through Science and Education" was placed in an unprecedentedly important position as a national policy. To meet the needs of New China' s social construction, China began the "Department

and Faculty Adjustment" of higher education in 1952, including the merging and closing of institutions, while simultaneously establishing a batch of new universities according to social construction and educational development needs. In this process, the adjustment of library materials and literature information was also carried out accordingly. The library construction undertaking during this period was deployed uniformly by the Ministry of Higher Education, striving to achieve resource allocation compatible with the disciplinary distribution pattern.

Second Stage: Confirmation of Key Universities and Library Development. In the early period of Reform and Opening Up, Comrade Deng Xiaoping explicitly proposed the idea that "Education and Science are strategic priorities for China' s socialist modernization construction" [7], and placed education in a strategically prioritized position for development. In 1978, the Ministry of Education announced 88 universities as national key universities. Universities entering the ranks of key universities received obvious preferential treatment in resource allocation, including first-class faculty, high-quality student sources, and school-running conditions. Library development and improvement were mainly reflected in substantial increases in library building construction and paper collection acquisition. Simultaneously, librarian team building naturally had more superior prerequisites, with more extensive channels and opportunities for selecting outstanding librarians to participate in professional training and academic advancement compared to their counterparts in non-key institutions.

Third Stage: Rapid Development Period for Universities and Libraries. Given the important contribution of education, particularly higher education, to national economic construction, China implemented the "211 Project" at the end of the 20th century—a trans-century project to build 100 universities with world-advanced levels in the 21st century. The practice of the 211 Project formed a positive policy superposition effect for relevant institutions in securing financial support, attracting high-level talents, absorbing high-quality student sources, resource competition, and influence expansion. Simultaneously, library building construction, per-student collection quantity, reading room area, and number of reading seats were included in relevant assessment and acceptance indicators, and the library construction of relevant universities achieved historic leaps. In 1998, 39 universities were selected for the "985 Project." Driven by this policy, university library construction entered the digital resource stage. Electronic resources, databases, space services, and remote document delivery gradually became popular and became common terminology in the library profession. Western literature and Hong Kong and Taiwan literature were also purchased on a large scale, with introduced assets becoming regular procurement resources for libraries and having broader circulation spaces. Meanwhile, the construction of high-quality librarian teams also became a focus of library work. This stage was a rapid period for the accumulation and development of material resources in university libraries.

Current Stage: A Critical Development Stage from Quantitative to

Qualitative Change. In 2015, the state proposed the major strategic decision of "Double First-Class" construction, which integrates key construction projects such as the "211 Project," "985 Project," and "Advantageous Discipline Innovation Platform." This is a breakthrough project for China' s higher education to transform from a quantity-strong country to a quality-strong country. Aiming at world-class universities and first-class disciplines, with level improvement as the main line and connotative development as the content, it aligns with the overall goal of China' s economic development shifting from high-speed to high-quality growth. Discipline construction, as the foundation and main body of this project, has been elevated to an unprecedented height. As an important component of university construction and development, university libraries must also clarify the development goal of "benchmarking against world-class university libraries." The "Double First-Class" policy provides an opportunity for the comprehensive development of resources, hardware, software, and services to catch up with world-class libraries. Simultaneously, it puts forward deeper, more specialized, and more detailed requirements for university library disciplinary services. University libraries must achieve qualitative improvement and transformation in resources, space, and services, and deepen disciplinary services and innovate service models to better adapt to these requirements [8]. The combined development trend driven by policy forms a comprehensive superposition effect that will push university library construction into a brand-new stage.

From the above analysis, as the main information resource center of universities, university libraries achieve their own staged development through the integration of material resources during each policy adjustment and promotion process in higher education. "Policy promotion"is a transformative effect from consciousness to material, representing a comprehensive positive effect superposition that demonstrates characteristics of concentration, efficiency, and internality.

2.1.2 Impact of "Scientific and Technological Revolution" on Library Function Positioning University libraries have a high degree of dependence on science and technology, and their information environment is an open system produced by the scientific and technological revolution. Libraries are also a physical unit within the scientific and technological system, connecting and reflecting specific changes in the scientific and technological information environment. The scientific and technological revolution represents the staged development of human mastery and application of science and technology, as well as the internal demand for the unity of the material world. After completing the bourgeois revolution, Britain took the lead in the first scientific and technological revolution, which spread to France, Germany, Japan, the United States, and other countries. Its characteristic was that natural sciences made considerable progress and were applied to the social and economic fields, enabling rapid development. This was the fundamental reason why the Industrial Revolution first occurred in Britain and Europe. Marx, living in the era of scientific and technological revolution, regarded science as "productive forces in the form of knowledge." Today, the new

scientific and technological revolution has swept the globe, with internet technology profoundly changing people' s production and lives. The scientific and technological revolution has changed the volume of information resources, the ways people obtain and connect with information, and how people think about and cognize information. As a collection of information resources, the "Double First-Class" library has undergone new, systematic changes in both function and positioning under the influence of the new scientific and technological revolution. First, the carrier of information resources has gradually shifted from physical paper to digitalization. The geometric development of digital storage capacity provides greater possibilities for preserving more information materials, while also posing new requirements for how to preserve and manage massive amounts of information. Simultaneously, information transmission terminals continue to expand, from the original single PC computers to laptops and various mobile terminals for "ubiquitous access," constructing a brand-new information dissemination network. The huge information volume of databases and convenient acquisition methods have changed the relationship between information and readers, and the physical connection between readers and libraries is changing. In this environment, university libraries need to develop from the original material resource collection to a comprehensive resource system. The ability to recognize changes in their own functional positioning during the development of the scientific and technological revolution and to reasonably utilize information technology to support discipline construction and provide systematic high-level services is key to building a first-class library and achieving system upgrading and docking. Resource mining and organization, new knowledge discovery and reuse, screening and collection of cutting-edge information, display of new technologies, open academic information exchange platforms, academic innovation spaces, and cultivation of readers' reading literacy will all be functions and value manifestations of libraries in the new technological and information environment.

The changes in the information environment brought about by the scientific and technological revolution represent an inherent functional adjustment and change for university libraries determined by their attributes. The contradictory nature of the information environment, which is both closed and open, is particularly prominent in the library field. The superposition effect of the "scientific and technological revolution"demonstrates extensiveness, profundity, and objectivity, requiring libraries to develop their own systems according to new functional positioning to adapt to the new technological environment and promote the positive effects of the scientific and technological revolution.

2.1.3 Impact of Superposition of "Policy Promotion + Scientific and Technological Revolution" on University Library Functions Comprehensively, the support of the "Double First-Class" policy and the changes in the information environment brought by the scientific and technological revolution have a superimposed influence that represents a holistic qualitative improvement and transformation for university libraries from inside to outside, from

consciousness to material, function to structure. The superposition of "policy promotion + scientific and technological revolution"is not a simple superposition of two systems but an internally related functional system. Science and technology are the primary productive forces, and their driving effect on national economic development is realized through the specific form of industrialization. The fundamental realization lies in the improvement of human quality levels, with the foundation originating from education. Policy is the concrete manifestation of national will and also guides and guarantees people' s specific behaviors. Therefore, policy changes reflect the state' s understanding and judgment of social development situations, are variable, demonstrate stage characteristics, and correspond to actual social development features. Since the founding of New China, China' s education policies have all reflected changes in the role and understanding of science and technology in national economic development. Therefore, higher education development policies are adaptive policies based on scientific consciousness and technological development goals. Science guides policy, and policy promotes science and technology.

The superposition effect of "policy promotion + scientific and technological revolution" is determined by the composite attributes and functions of university libraries. First, it is a collection of information resources and a physical unit in the scientific and technological environment. Simultaneously, it is an important organizational institution within the university, reflecting university development strategies and implementing development policies. It is a main department for discipline construction and also a learning place for teachers and students. Therefore, university libraries externally connect and reflect the development and changes of the scientific and technological environment, and internally provide information collection and exchange spaces and platforms for scientific research and learning. Analyzing "Double First-Class" university libraries, first-class discipline construction is the internal driving force for library development; the information technology generated by the scientific and technological revolution provides material and technical support for library discipline construction and comprehensive services. The core of the superposition effect of "policy + technology" on libraries is the composition and organization of resources.

2.2 Impact of "Policy Promotion + Scientific and Technological Revolution" on Library Resource Organization

The superposition effect is reflected in three aspects: superposition of environmental space; superposition of resource composition and organization methods; and superposition of service awareness and connotation. The superposition effect of these three aspects is not a simple attribute accumulation but a mutually integrated development system. Library space has expanded from information inquiry, book reading, and self-study physical spaces to electronic information transmission and exchange spaces, becoming interactive platforms for information acquisition, exchange, and interchange. Physical spaces have

also undergone specific characteristic development along with the diversification, personalization, and specialization of reader services. The construction and development of spatial environments present the effects of external superposition. They are based on the transformation of information resource organization methods and coordinated with the construction of service systems. Physical library buildings, characteristic cultural spaces, and virtual spaces (such as websites, forums, APPs, WeChat official accounts, etc.) constitute the library' s spatial resource system. Collection information resources achieve circulation, exchange, and use through classification and management via spatial platforms. The service system forms a diversified method combining tradition and informatization, managing information resources and promoting effective connection and exchange between resources and users. This constitutes the operational mechanism of "Double First-Class" university libraries under the influence of superposition effects. The core is the composition of the resource environment, the spatial system is the operational carrier, and the service system is the connection method. The expansion and refinement of physical space, changes in information resource organization and management methods, and transformations in service personnel' s identity, awareness, and work content all adapt to changes during the superposition process.

The superposition effect emphasized in this paper represents, in nature, a development from a simple information resource collection to a three-dimensional, multi-dimensional composite system in terms of resources. In terms of connection methods, resources have developed from relatively static planar connections to a diversified, multi-directional dynamic connection system. The organization of resources enables more flexible, segmented, and precise personalized and specialized organization and management according to readers' diverse needs through different connection methods. Therefore, resource integration and construction are also corresponding systematic projects.

2.3 Impact of "Policy Promotion + Scientific and Technological Revolution" on Library Management Models

The influence process of superposition effects on "Double First-Class" university libraries is an open, interactive system with its own operational mechanism (see Figure 1 [Figure 1: see original paper]). "Double First-Class" university library management needs to clarify the series of influences brought by the superposition effect of "Double First-Class" construction policy and scientific and technological revolution, and then clarify their own new positioning and functions. Based on the new resource environment and operational mechanism, a systematic scientific management model centered on first-class discipline construction services will be the main direction for university library construction and development.

The superposition influence of "policy + environment" on libraries is systematic and nonlinear. Based on the systematic development of functions and resources, the management model also corresponds to its system composition. Manage-

ment aims to promote effective resource allocation and overall system coordination to achieve effective functioning of library organizational functions. The management model under superposition influence is nonlinear and requires open systematic changes. The management model constructed under the resource organization and service methods dominated by paper resources is relatively extensive, clearly segmented, mostly based on one-way vertical connections, with clear hierarchies but limited horizontal connections and collaboration, poor flexibility in responding to changes. This model corresponds to the phased development of schools and the characteristics of traditional information resources. In the new resource environment formed by superposition effects, the traditional management model shows obvious limitations and constraints, with low management efficiency affecting the comprehensive benefits of libraries. First, the segmented organizational structure lacks integration and effective communication, cannot adapt to the three-dimensional network connection of information, and instead causes information 断层 (gaps) and inefficient transmission, resulting in low management efficiency and service efficiency. Second, the relatively closed self-management model cannot truly form effective docking with disciplines and readers, and cannot achieve the goals of discipline construction and quality service. Third, the passive consciousness inherent in traditional libraries also forms consciousness inertia among most librarians, hindering the actual effectiveness of going out to serve. Fourth, there are large differences in the quality of librarian service teams, and team building corresponding to resource environment development is a systematic project with certain difficulties. Under the influence of superposition effects, the organization methods of library resources, spatial expansion and construction, and the fully open three-dimensional connection and interactive service system all require the establishment of a scientific and open management model.

3 Countermeasures for Superposition Effect Impact on "Double First-Class" Libraries

Facing the composite superposition influence of "policy + technology," "Double First-Class" university libraries first need to clarify the positive effects of "policy promotion," grasp it holistically from an ideological perspective, and make full use of this positive effect in construction and management. Then, they need to reasonably allocate policy advantages and material resource tilts, establish an open system in a three-dimensional space, stimulate internal dynamic mechanisms, promote the exertion of positive influences through adaptation to and rational utilization of the scientific and technological environment, and thereby achieve the positive amplification of the superposition effect of "policy + technology."

3.1 Grasping the Connotation of Resource Environment is the Prerequisite for Realizing Positive Effects

Grasping the connotation of resources at the current stage is the foundation for promoting positive effects. Traditional library resources refer to paper documents, materials, and electronic digital resources. The "resources" discussed under superposition effects are broad, including paper documents, digital information resources, library buildings, virtual information space platforms, and resource environment systems composed of various types of personnel teams. During the overall transformation of resources toward a digital resource focus, the proportion of library resources begins to change, with digital information resources gradually becoming the main body. The network information exchange and interaction platform developed based on this gradually constructs a library information virtual space that complements and integrates with the library' s physical service and exchange space functions. This is the core and framework of the resource environment. The service system that achieves effective connection between the two is the key. Library resource construction needs to be discipline-centered, prioritizing the relevance of resources to disciplines and their support for discipline construction. The library' s resource system construction must unfold based on this foundation, exploring effective management models adapted to it through resource organization, environmental construction, and service system adjustments.

3.2 Construction of Resource Environment System is the Core of Realizing Positive Effects

The construction of university library resource environment systems is the core of promoting positive superposition effects and the material foundation for effective resource management. In the "Double First-Class" construction process, libraries are the main construction bodies. They need to recognize the profound impact of the information environment on library construction and development driven by the "Double First-Class" policy, grasp the connotation of resources, organize the structural composition of their own resources and relational resources, and build a new library resource environment using the advantages of the information environment according to school development ideas and plans, thereby improving management methods to better serve teaching, scientific research, and talent cultivation. Specific breakthroughs can be made from the following aspects.

3.2.1 Resource Optimization and Organization Management is the Core of Resource System Construction Document resources are the material, information, and social foundation of libraries. Surrounding first-class disciplines, libraries need to reconsider and plan document resource construction, enhance the relevance of resources to disciplines, strengthen support for discipline construction, and improve the benefits of library resource utilization.

(1) Knowledge Organization and Resource Management Innovation. Effec-

tive knowledge innovation reorganization of library collection resources should be implemented to achieve knowledge sharing, knowledge innovation, knowledge diffusion, and value-added knowledge. The essence is to break through current document management and information management models, aim at knowledge discovery, and reorganize knowledge and resources to obtain effective information from resources, capture knowledge from information, explore new knowledge and open up the unknown from existing knowledge, and gradually organize and classify to form their own characteristic information resource databases. The foundation lies in information resource organization, with the goal being reproductive systematic management of information resources.

(2) Knowledge Screening and Learning Literacy Cultivation. In the era of information development, knowledge exhibits three major characteristics: first, big data and ubiquity; second, total volume growth and structural complexity; third, fragmentation and semantic structure. How to identify real, effective, novel, potentially useful, and ultimately understandable patterns from vast amounts of information, and transform information into knowledge and resources, will become a major social survival skill. For university libraries, this is the core content of student learning literacy cultivation.

Under the conditions of continuous development in knowledge volume and fields and the 普及 (popularization) of ubiquitous technology, information acquisition has become more convenient, and mobile learning has become the norm. However, machine learning often obtains fragmented knowledge, lacking depth and quality. At this time, as the base for student learning literacy cultivation, university libraries need to undertake the task of in-depth resource mining and information grasping. Through screening and managing massive amounts of information, they can provide readers with authentic and high-quality information resources. Simultaneously, in the process of screening and managing information, they can summarize experiences and methods, form knowledge systems, and conduct training for students in different forms, categories, and stages, providing exercise opportunities to gradually improve students' learning literacy.

(3) Resource Organization and Discipline Construction Support. The author believes that what differs from before the implementation of the "Double First-Class" policy is that under the "Double First-Class" context, library resource construction must be discipline-centered, prioritizing the relevance of resources to disciplines and their support for discipline construction. The discipline-centered resource construction and organization method requires a qualitative change from ideological consciousness to specific models. Against the background of discipline construction, libraries first need to classify and organize existing resources and allocate them reasonably. Establishing effective connection methods between the library and various relational entities—namely, scientific research and readers—

through resource organization methods is essential. Reform in acquisition and cataloging is primary, requiring the formation of an open and good information interaction model that connects discipline and reader needs with procurement, forming effective communication and demand information collection and organization, and using reasonable systems to guarantee the actual utilization benefits of procurement. Simultaneously, surrounding "Double First-Class" discipline construction, seemingly unrelated information can be connected through knowledge interconnection, integrated analysis, and computational mining. Based on different needs and the concept of "domain"or "semantic structure,"fragmented knowledge can be reorganized to form discipline resource systems and knowledge organizations with internal logical relationships, providing specialized services for disciplines. Additionally, a resource organization evaluation system needs to be established. Resource procurement and organizational allocation are systems that coordinate internal resource structures with external discipline environments. The essence is the practical and effective connection between resources and users. The effectiveness of this connection—i.e., resource organization benefits—can be achieved through establishing corresponding internal and external resource organization evaluation systems: an external discipline development information evaluation system + an internal acquisition and cataloging benefit evaluation system, realized through the coordinated development of the dual systems.

3.2.2 Three-Dimensional Construction of Spatial Resources is the Operational Carrier for Resource System Construction The three-dimensional construction of library space is the physical carrier for connecting policy, resources, and information environments, as well as the material manifestation of positive superposition effects. The new information resource environment is a more open dynamic system that requires libraries to adjust their original semi-open state and build new open systems to adapt to its development. The 普及 (popularization) of internet platforms and various mobile terminals has made electronic information circulation and virtual space interaction among user subjects an emerging method of library resource circulation and an extension of library space environment. In this situation, library space has formed a superposition system of basic physical space, characteristic space, and internet virtual space. In addition to providing traditional learning, reading, and borrowing services, libraries have gradually developed into more diversified and interactive exchange spaces for practicing new inventions, technologies, and knowledge, professional consultation, learning support, and information exchange, generating new learning and reading models. Here, "communication" will become the new theme, whether between people and information or between people. Smart learning spaces will provide teachers and students with a brand-new learning experience. Libraries have equipment available for use, with guidance teachers and classmates for discussion. This is a learning method based on the internet and intelligence. The "supply side" of resources, equipment, and services differs

significantly from traditional libraries. Against the "Internet +" background, since readers' information needs differ from the past, "finding readers for books and finding books for readers" has acquired entirely new meanings. Libraries need to build smart service platforms adapted to this: Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), Intelligent Interactive Technology, and IC learning space construction will all become new directions for effort. This new service platform endows library "reader services" with new meaning. It also redefines the questions of "how to learn" and "what to learn" in university libraries [10]. Through re-understanding and constructing spatial systems, libraries can transform material resources into discipline construction, talent cultivation, and even educational concept development, providing more and better approaches and methods.

3.2.3 Diversified Service Orientation Provides Effective Connection for Resource System Construction The composition of the new resource system requires diversified services to form effective connections and operations. It originates from changes in the connotation of library services and overall development needs under superposition effects. The segmentation of librarian service content, improvement of service levels, and professional development of disciplines are all inevitable trends. How to allocate, cultivate, and improve librarians' service levels, capabilities, and literacy, and establish a talent team corresponding to resource construction, is key to resource optimization and development. Discipline construction is the phased core of "Double First-Class" university library services. Under the superposition effect of "policy + technology," library services should establish a diversified service system that is well-connected and collaborative, centered on discipline construction services and based on resource environment frameworks.

The core of discipline services lies in the cultivation of professional subject librarians and team development. Addressing current problems in the development of subject librarians in universities, first, subject librarians need to have a holistic understanding of the connotation and forms of discipline construction from a consciousness perspective. Organizationally and managerially, the structure of discipline service teams needs to be adjusted according to needs to improve librarian quality. Focusing on "Double First-Class" discipline construction, ensuring quantitative tilting of resources and services for key discipline construction, and developing academic research and discipline team building are essential. Professional subject service librarians should be equipped for advantageous disciplines to provide embedded services throughout the entire process of work, scientific research, and management, capable of completing collaborative subject services such as discipline knowledge analysis and academic research participation. Simultaneously, attention should be paid to the professional and quantitative allocation of subject service librarians for advantageous disciplines, achieving "specialization" rather than "scattering" [11]. Additionally, a "learning + research" talent cultivation mechanism needs to be gradually established, and the system of professional librarians for subject services should

be improved to achieve comprehensive guarantees from personnel quality to management systems. Under superposition effects, service methods require diversified and effective adaptive changes in both consciousness improvement and specific behaviors. First, internally, the service awareness of "subject-centered" and "reader-centered" should be clarified. Work ideas and content need to be synchronized with school construction and development, changing the traditional semi-closed state and single service model. Cultivate open thinking and connection methods, combine the form of "professional librarians + all-staff level improvement," actively go out to establish effective and benign interactive relationships with discipline service objects and reader users. Externally, combine resource entities and the diversified forms and conditions of information connection methods, use various information platforms and terminals as technical support, establish reasonable and effective systems for information collection, organization, screening management, and exchange, and thereby build an effective service system corresponding to the new resource environment and discipline construction planning.

3.3 Construction of Resource Environment System Management Model is the Effective Guarantee for Realizing Positive Effects

The superposition effect studied in this paper includes the development ideas and positioning of "Double First-Class," as well as library resource expansion and construction. The two constitute a mutually inclusive composite environment. Analyzing its nature, the development ideas of "Double First-Class" are the ideological and behavioral goals for library development, while resource system organization and construction are the methods and approaches for library development. The two are interrelated. Good resource organization, management, and open-adaptable management models are key to the construction and development of "Double First-Class" university libraries.

Under the new resource framework, "Double First-Class" university libraries demonstrate superposition effects in function, spatial environment, basic resources, and services. It is necessary to clarify the operational mechanism of the new resource system, adjust resource organization allocation and management, establish a target service system based on library resource use efficiency assessment. The construction and development process of library academic nature is essentially a process of adapting to school discipline construction. An effective management model makes discipline construction a natural integration process into library construction and forms effective support for library discipline construction services. Adjusting and establishing a systematic and open management model can improve the comprehensive benefits of libraries for schools' "Double First-Class" construction.

Based on the above discussion and thinking about resource organization and service management methods, an open connection model between libraries and users based on the new resource environment framework and new spatial system as the operational platform should be an ideal choice. That is, according to the

actual discipline construction and development ideas at the school level, gradually shift from the previous centralized and average collection of main resources from outside to inside, to the development and segmentation of resources from inside to outside, based on main discipline construction. Provide segmented, tilted, and specialized, high-level service management models. It will break the existing internal semi-closed state, enable libraries to become outward-oriented open information resource spaces, form effective connections with departments, achieve resource sharing and coverage. Simultaneously, it will tilt resources toward key disciplines according to school discipline construction, improve information consultation and discipline evaluation service levels, enhance academic output efficiency, leverage the advantages of library information resource platforms, build open academic exchange spaces, expand new functions for student learning literacy cultivation, gradually achieve optimal resource allocation, and maximize the benefits of "Double First-Class" construction.

Conclusion

"Double First-Class" university construction is a powerful propeller for Chinese higher education to transform from "big" to "strong" and achieve a qualitative leap under the background of the new scientific and technological revolution. For university library construction and development, its impact will exceed any previous period. The systematic superposition effect of "policy promotion + scientific and technological revolution" brings unprecedented opportunities and challenges to libraries. The implementation of the "Double First-Class" strategy means that university libraries will face upgrading from hardware to software, and a fundamental transformation and improvement from traditional resource ownership and collection to service ideas and service levels [12].

Historical experience shows that when library development forms a synergy with national policy orientation, the positive effects of policies are fully realized, and library construction and development enter a virtuous cycle. Under the "Double First-Class" background, library construction urgently needs to grasp the essence, characteristics, and specific manifestations of the superposition effect generated by "policy promotion + scientific and technological revolution," and make holistic adaptive adjustments in resource construction, service systems, and management models. Building a first-class resource, first-class service, and first-class management library system will promote the positive and controllable development of superposition effects.

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Author Contributions:
Li Donghong: Determined research topic, designed research framework, wrote strategy sections, revised and approved final manuscript.
Hu Ying: Introduced and defined theory, drew mechanism diagram, wrote main body of paper, revised manuscript.
Yang Wenhui: Wrote introduction, development stage sections, conclusion sections, revised manuscript.

The Superposition Effect of "Policy Promotion + Scientific and Technological Revolution" on the Development of University Libraries

Li Donghong[1],[2], Hu Ying[2], Yang Wenhui[2]
[1] Institute of Ethnic Studies, Dali University, Dali 671000
[2] Yunnan University Library, Kunming 650091

Abstract: [Purpose/significance] It analyzes and grasps the essence, character-

istics and manifestations of the superimposed influence of the "Double First-Class" policy promotion and scientific and technological revolution development on university libraries, puts forward targeted countermeasures and suggestions, constructs a new situation of university library resources, environmental space, service and management system, and promotes the positive development of superposition effects. [Method/process] By introducing the theory of superposition effect, this paper defines the concept of superposition effect of "Double First-Class" university libraries, and then analyzes the specific influence and characteristics of "policy promotion + scientific and technological revolution" on the development of university libraries, and models the influence mechanism diagram of superposition effect. [Result/conclusion] The complexity of the functions and attributes of university libraries themselves is the basis for the superposition effect to play its role. On the basis of grasping the essence and mechanism of the superposition effect, the university library can realize the subject-centered, first-class resource, service and management innovation.

Keywords: policy promotion; scientific and technological revolution; Double First-Class; university libraries; superposition effect

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