Research on University Library Space Redesign and Service Innovation: Postprint

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Abstract

[Purpose/Significance] This paper examines the concepts and practices of space renovation at Shenyang Normal University Library, providing reference and guidance for current university libraries to break through service bottlenecks and achieve successful transformation through space renovation. [Method/Process] Taking cases of library space renovation and spatial services as examples, it summarizes the concepts and scale of university library space renovation, as well as the themes and intensity of spatial services based on space renovation, and proposes development directions for library spatial services. [Results/Conclusion] Shenyang Normal University Library has accumulated rich experience in space renovation and the cognition and practice of spatial services, providing a highly feasible pathway that can serve as a reference for other university libraries to successfully undertake space renovation.

Full Text

Preamble

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Research on Space Reengineering and Service Innovation in University Libraries

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Abstract

[**Purpose/Significance**] This paper examines the philosophy and practice of space reengineering at Shenyang Normal University Library, providing a reference for university libraries seeking to break through service bottlenecks and

achieve successful transformation via space reengineering. [**Method/Process**] Using case studies of library space reengineering and spatial service initiatives, this paper summarizes the philosophy and scale of university library space reengineering, as well as the objectives and intensity of spatial services based on reengineering, and proposes future directions for library spatial services. [**Result/Conclusion**] Shenyang Normal University Library has accumulated rich experience in space reengineering and spatial service cognition and practice, offering a highly feasible and replicable path for other university libraries to successfully undertake space reengineering.

Keywords: university library; space reengineering; service transformation; reading space administration
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On November 29, 2017, the third "Chinese Reading Leader Awards" ceremony was held in Shenzhen, presenting seven awards including Reading Project Award, Reading Organization Award, Reading Space Award, Digital Reading Award, Reading Support Award, Annual Reading Leader Award, and Annual Tribute Award. Shenyang Normal University Library (hereinafter referred to as SNU Library) received the "Reading Leader · Reading Space Award," becoming the first university library in China to receive this honor. The award citation stated: "If there is a heaven, it should look like a library!" The library's exceptional spatial design and its three-tier layout of "Library → Teaching-Living Area → Micro-space" make reading omnipresent, opening horizons for a generation of readers, leading the reading trends of an era, and shaping the ideals, pursuits, and tastes of young people. Known as "someone else's library," SNU Library's success does not rely merely on the aesthetics of spatial renovation; rather, it has reengineered over 20 themed characteristic spaces and created more than 20 service brands, demonstrating over 20 types of reading styles. As one reader noted: "The value of this library makes its readers valuable people." This paper analyzes the philosophy, practice, and transformation journey of this library's space reengineering and spatial services.

1. Origins of Space Reengineering: Global Library Transformation Trends

1.1 Rebirth Through Nirvana

SNU Library was put into use in 2000 after the university's relocation, representing a typical second-generation library model with an open, transparent layout that was considered relatively advanced in China at the time. The library's main operations centered on collection resources, with borrowing rates continuously rising and subject services flourishing, attracting over 10,000 daily visitors. However, with the popularization of information technology and the gradual enrichment of digital resources, readers' habits began to change. Around 2010, the library's development hit a bottleneck: paper resource borrowing rates dropped

sharply, visitor numbers declined, and traditional services fell into difficulty. This was a common problem faced by university libraries across China, casting doubt on the value of libraries as physical spaces and reviving the once-popular "library extinction theory." In 2011, B.T. Sullivan's *A Autopsy of the Academic Library in 2050* [1] vividly portrayed the difficult situation facing traditional libraries, prompting the global library community to contemplate the future development and positioning of libraries and how their value should be manifested. Domestic libraries were also searching for a way out, seeking an opportunity for rebirth through nirvana.

1.2 The Opportunity for Spatial Transformation

Traditional spatial epistemology embedded library services within rigid spaces, pushing libraries to the brink of "extinction." The solution to this dilemma lay in "space" itself. Changes in learning behaviors and reading habits showed not only a gradual shift toward digitalization but also a preference for small-group learning and discussion formats and a greater willingness to share knowledge. Simultaneously, readers placed more emphasis on spatial comfort and privacy, paid more attention to personal privacy protection, and had more urgent needs to experience and understand new technologies and products. These behavioral characteristics and spatial demands could not be met by traditional library spatial designs [2]. Creating or reengineering library spaces centered on readers became the opportunity and key to global library transformation. The concept of library space reengineering can be traced back to August 1992, when the University of Iowa Library's "Information Arcade" became the origin of the global "IC" (Information Commons) movement. Since then, innovative spatial constructions have emerged worldwide, such as Colorado's "Anythink" Library and Helsinki City Library's "Urban Office" in Finland, all representing successful transformations. The 2005 article *Information Commons in an Open Access Environment* [3] first introduced the term "information commons" to China's library community. In 2015, an important topic in the U.S. *NMC Horizon Report: 2015 Library Edition* was "rethinking library space" [4]. In 2016, forums such as the "University Library Space Reengineering Forum" and "China University Development Forum" were held successively [5]. In August 2016, the IFLA conference proposed the theme "Beyond the Third Place: Positioning Future-Powerful Libraries" [6]. To date, the concept of space reengineering has been widely accepted by university libraries both domestically and internationally, with China's library community launching a wave of space reengineering that echoes the global movement and research fervor of "libraries as the city's third space" [7].

1.3 The Imperative of Transformation

University libraries' choice to complete reform and transformation through "space reengineering" has its inevitability. Taking SNU Library as an example: First, the library's traditional operations and borrowing rates were declining,

with utilization rates decreasing year by year. Subject services were limited by the university's scale and insufficient library human resources, making further deepening and breakthrough difficult. New services such as innovation and entrepreneurship education and reading promotion urgently needed supporting spatial facilities. Second, the library's original spatial layout could not meet readers' increasingly diversified needs, necessitating fundamental transformation. Third, the library needed to fulfill its own functions. The *Regulations for Libraries in Regular Institutions of Higher Education* stipulates that "the main functions of a library are educational and information service functions. Libraries should fully play their role in talent cultivation, scientific research, social service, and cultural inheritance and innovation" [8]. To successfully fulfill these functions, libraries need to transform spatial construction in a timely manner. Fourth, this is the trend of the new era, with unprecedented consensus both domestically and internationally on achieving a new round of library transformation through space reengineering. Since 1992, after 25 years of research and accumulation, library space reengineering has achieved fruitful results in both theoretical research and practical implementation, with more and more libraries joining the movement. Numerous university libraries in China will inevitably not miss this transformation trend.

2. Philosophy of Space Reengineering: Advancing with the Times

SNU Library's space reengineering project began in 2011. By the first half of 2018, the renovation project had gone through six phases, creating over 20 spaces across five major categories integrating autonomous learning, exchange and discussion, and sharing display functions. The spatial renovation has always adhered to a people-oriented design philosophy, keeping pace with the times, being reader-demand-oriented, serving the university's teaching and research, innovation and entrepreneurship education, and talent cultivation, and creating the library's spatial cultural characteristics.

2.1 Overturning Tradition and Adapting to Era Innovation

2.1.1 Breaking Mental Sets and Overturning Traditional Concepts

Space reengineering is not simply decoration of existing library spaces but rather replanning and layout based on future functions. The popular "third space" theory abroad provides a reference for university libraries to become students' third space beyond classrooms and dormitories. A library is a "growing organism" that only gains true meaning when it has life and soul, which broadens our thinking in space reengineering and functional examination [9]. SNU Library completed renovation processes including literature consolidation, partial demolition, layout adjustment, and system reconfiguration, thoroughly breaking free from the constraints of the original spatial pattern.

2.1.2 Integrating Era Elements and Aligning with Era Themes Creating library spaces with distinct era characteristics is the key to attracting contemporary university students and maintaining spatial vitality. Well-known domestic university libraries such as Wuhan University Library and Shanghai Jiao Tong University Library began designing maker spaces when the nation proposed the slogan "Mass Entrepreneurship and Innovation," ushering in a new era of maker space construction in Chinese university libraries. Their maker space styles and functional settings have become models for other university libraries [10].

2.1.3 Occupying the Technological Frontier and Leading Innovation Trends Integrating advanced technology in spatial construction is essential for supporting teaching and research and enhancing user literacy. The North Carolina State University Library established a visualization technology experience center to provide a visual teaching environment for faculty and students in science and engineering disciplines, equipped with large-scale display devices, monitoring equipment, and VR education systems. The "SJTU-JD Maker Space" jointly created by Shanghai Jiao Tong University Library and JD.com has maintained a leading position in technology, featuring 3D printers, greeting robots, drones, smart bracelets, virtual reality systems, and motion-sensing interactive game consoles [11].

2.2 Developing Characteristics and Emphasizing Scientific Planning

2.2.1 Centering on University Development and Highlighting Professional Characteristics Serving the university's development strategy and supporting teaching and research is the foundation and focus of all library work. When Taiwan Chung Hsing University Library built the "Xingyue Square," it fully considered its prominent agricultural science characteristics, using forests and farms as design themes and employing technological means to create a green forest atmosphere [12]. SNU Library created the "Starry Sky Creative Picture Book Museum," providing teaching and practice space for pre-primary and primary education majors, pioneering the construction of picture book museums in university libraries. Within less than a year of use, it conducted 82 teaching activities, fully demonstrating the supporting role of the new space for disciplinary development.

2.2.2 Formulating Long-term Plans and Phased Progressive Implementation Scientific planning can prevent space reengineering from blindly following trends, achieve rational spatial layout, and align with the university's long-term development goals. Phased implementation mainly considers two factors: First, funding constraints. Most domestic libraries cannot fund the renovation of all spaces at once; even with funds raised from other channels, at most 2-3 spaces can be renovated simultaneously. Therefore, space reengineering must prioritize based on urgency. For example, Taiwan Chung Hsing University Library implemented space reengineering in two phases starting in

2009, with the first phase of Xingyue Square completed in 2010 and the second phase of the multimedia creation workshop completed in 2015 [12]. SNU Library's completed 20+ spaces were built in six phases [13]. Second, forward-looking long-term planning. The evolution from IC (Information Commons) → LC (Learning Commons) → MC (Maker Commons) involves short intervals between new concepts and their implementation, with multiple new concepts possibly emerging simultaneously. Faced with such frequent updates, space reengineering must maintain forward-thinking awareness and keep pace with the times.

2.2.3 Demand-Driven Reengineering and Service Preceding Space The general procedure for space reengineering is: based on changing reader needs → determining philosophy → in-depth research → analysis and design → feasibility report → service functions → effect pre-assessment, with all efforts aimed at achieving perfection to gain strong university support. Space reengineering must not become a "vanity project" but should genuinely center on readers, be driven by reader needs, ensure immediate utilization after construction, and become a driving force for library development.

2.3 Ingenuity and Humanistic Care

2.3.1 People-Oriented and Meeting Reader Demands Meeting reader demands is a prerequisite for space reengineering. Reader demands mainly include: first, functional demands—renovated spaces and supporting facilities must achieve preset functional goals. Second, spatial demands—sufficient space area must be reserved according to function during design. Third, technical demands—spaces with complex equipment operations require relevant guidance personnel. Additionally, various personalized needs such as lighting, stages, and book resources must be considered during space reengineering.

2.3.2 Details Matter and Optimizing Reader Experience Space reengineering must reflect humanistic care in every design detail. Charlotte Beck stated in her report *From Basement to Garden: Technology-Driven Library Space Transformation* that users' most urgent requirements for new spaces are comfort, quietness, and brightness [14]. Beijing University of Civil Engineering and Architecture Library designed desk lamps on reading tables that are both aesthetically pleasing and suitable for reader lighting needs. Xi'an University Library added two extra chairs for each table to facilitate students placing their belongings, and furniture in themed activity areas can be combined for different uses [15].

2.3.3 Environmental Protection and Protecting Reader Rights Integrating environmental protection concepts in space construction, using eco-friendly materials, and minimizing harmful substances are effective manifestations of humanistic care. Basic renovation materials, flooring, and bookshelves

all prioritize environmental protection as the first criterion, with numerous green plants placed to effectively protect readers' health and create a beautiful spatial environment. Renovation timing is arranged during winter and summer vacations whenever possible to minimize noise and dust impact on readers. All space usage is self-scheduled by readers through a reservation system, with strict management systems providing effective protection for reader rights.

3. Scale of Space Reengineering: Comprehensive Spatial Expansion and Transformation

The library space reengineering project represents a comprehensive expansion and transformation of traditional functional zoning, achieving mutual integration and promotion of virtual and physical spaces from an overall layout perspective, and balancing dynamic and static spaces. In terms of service functions, it has undergone an innovative transformation process from document services → information services → knowledge services → spatial services → smart services, continuously achieving functional reform, expansion, and improvement to provide readers with the most perfect experience.

3.1 Integration of Virtual and Physical Spaces: Expanding Spatial Connotations

3.1.1 Physical Spaces Extending Service Depth Physical spaces are the foundation supporting reader services. Deep services that were previously impossible can now be attempted and advanced in newly created spaces. The North Carolina State University Library's game laboratory integrates disciplinary resources from humanities, management, and science and engineering, providing simulation systems and human-computer interaction equipment to assist in exploring new game environments, developing interesting teaching methods, and conducting collaborative training [16].

3.1.2 Virtual Spaces Expanding Service Breadth Virtual spaces are network interaction platforms built by libraries, generally including library homepages, WeChat, Weibo, micro-platforms, and online classrooms with interactive functions. Readers can query and utilize digital resources, as well as conduct learning, sharing, and exchanges. The emergence of virtual spaces breaks the temporal and physical limitations of physical spaces, truly achieving ubiquitous library pan-services. It covers more people and provides broader service scope, greatly extending the spatial and temporal dimensions of library services.

3.1.3 Virtual-Physical Integration Increasing Spatial Connotation The organic combination of virtual reality technology and multimedia technology accelerates the integration of virtual and physical spaces, greatly expanding spatial connotations. First, using virtual reality technology to recreate physical spaces in virtual environments—for example, Capital Normal University Library used 3D virtual technology to completely restore physical

buildings in virtual space and expanded them to form a virtual library community, providing service types not available in physical spaces such as e-book exhibitions, film screenings, and themed activities [16]. Second, mutual embedding of virtual and physical spaces makes them closely integrated with interconnected access—for example, Shanghai Library's collection of family genealogy exhibitions allowed viewers to scan QR codes next to exhibits to enter virtual exhibition halls for more information. Third, interaction between physical and virtual spaces—for example, the library's online "Listening Reading" column created through the WeChat platform and offline "Listening Reading" created through reading spaces complement each other in content and echo each other in form, achieving perfect integration of virtual and reality.

3.2 Balancing Dynamic and Static Spaces: Rational Overall Layout

3.2.1 Rational Layout Through Dynamic-Static Zoning For dynamic-static space zoning: First, solve through layout by placing all noisy spaces far from quiet spaces, using sound insulation and absorption materials during construction to minimize sound impact. For example, Liaoning Provincial Library concentrated potentially noisy spaces such as multimedia audio-visual areas, electronic reading areas, and new technology experience areas in a relatively independent area on the south side of the second floor, with special treatment of floors, walls, and doors/windows in each space to maintain overall tranquility. Second, for newly added dynamic spaces that cannot be clustered, choose enclosed spaces with walls for renovation to avoid mutual influence. Additionally, technical means can be used to seek balance between dynamic and static—for example, Singapore's public libraries built libraries in commercial centers, combining shopping "movement" with reading "stillness" to achieve "quietness amidst bustle."

3.2.2 Overall Coordination Pursuing Harmonious Unity During space reengineering, attention must be paid to: First, overall style harmony and unity—connecting parts such as doors, space names, and space introductions should not be too abrupt in form and color. Second, functional distribution using clustering principles—spaces of one type should be adjacent or close; if clustering is impossible, use conspicuous signs for guidance. Third, proper "blank space" design—there should be larger intervals between two different functional zones to help readers distinguish spaces, facilitate usage, and leave room for subsequent space reengineering.

3.3 Complete Functions and Diversified Extension

3.3.1 Complete Functions Achieving Comprehensive Coverage Through space reengineering, SNU Library has integrated and renovated all areas except office areas and ancient books rooms in phases, currently creating five major functional spaces including reading spaces, maker spaces, information literacy education spaces, learning and discussion spaces, and cultural display

spaces, achieving comprehensive transformation and coverage of traditional library functions.

3.3.2 Multi-Purpose Rooms Emphasizing Functional Extension To maximize space efficiency, each space has both characteristic functions and general configurations, enabling functional conversion. For example, Mingde Lecture Hall's primary function is traditional classic reading and sharing, but it can also host reading salons, classic appreciation lectures, film and television appreciation, support small-class teaching, and convert to learning and discussion spaces, opening as self-study spaces when no activities are scheduled. Therefore, after the construction of various library spaces, student study seats did not decrease but actually increased. When space usage is tight, most spaces can achieve functional conversion to alleviate usage conflicts.

4. Focus of Spatial Services: Emphasizing Autonomous Learning Ability

Space reengineering has made libraries the focus of attention again. While providing readers with beautiful environments and good experiences, it has also created new ideas and opportunities for library spatial transformation and service innovation. If space is compared to the human body, then services based on space are the soul. Only when soul and body are perfectly integrated can vitality and energy emerge. The main focus and core of university library spatial service transformation is the cultivation and enhancement of students' comprehensive abilities, especially autonomous learning ability.

4.1 Multi-Dimensional Spaces + Stacked Functions

University library spatial services are primarily based on the multi-dimensionalization of spatial functions. Along each functional dimension, corresponding characteristic activities can be developed to provide readers with the highest quality spatial experience. Spatial functional dimension refers to a perspective for measuring and characterizing spatial functions, not a numerical value. It is a multi-directional, multi-angle, and multi-level concept for evaluating and determining functional concepts. These spatial functions mutually support, influence, and promote each other, jointly forming the backbone of the library spatial service system [17]. The design of each specific space incorporates as many functional dimensions as possible—the more dimensions, the richer the functions provided and the greater the stacking effect. For example, SNU Library's "Starry Sky Creative Picture Book Museum" encompasses five dimensions: (1) Providing reading space and resources for picture book enthusiasts, accommodating over 60 readers with more than 3,000 Chinese and foreign picture books continuously updated. (2) Supporting professional learning for pre-primary education majors—since its launch in September 2017, the library has jointly offered general education elective courses and professional courses such as "Classic Picture Book

Reading and Appreciation" with the pre-primary education major, further deepening the learning and education functions of the picture book museum. (3) Utilizing the picture book museum's stage to rehearse small picture book dramas, providing students with innovative practice opportunities. (4) Hosting excellent traditional culture picture book exhibitions and classroom handicraft work exhibitions by professional students using the museum's small display shelves and bookshelves. (5) Enhancing students' writing, performance, organization, coordination, and operational abilities through various activities in the picture book museum, comprehensively improving student literacy. The multi-dimensional space + stacked functions service model transforms reengineered spaces into autonomous and dynamic spaces that meet readers' diversified needs.

4.2 Original Functions + Created Services

The functions intended to be realized during the initial design of reengineered spaces are the original functions. Services created and derived from original functions are the branches and leaves on each trunk—the more numerous and densely distributed the leaves, the more flourishing the tree. Therefore, to enable the reengineered spatial service system to grow robustly, it is necessary to continuously branch out around original functions. Created services make the entire service system increasingly substantial in content and richer in form. The emergence of reengineered spaces has created a huge tree-like spatial service system (see Table 1), which represents the library's development path.

Table 1. SNU Library Spatial Service System

Space	Original Function	Created Services
Reader Discussion Space, Language Exchange Space, Qizhi Academic Discussion Space	Supporting Learning and Research	Foreign Language Corners, Human Libraries, Qizhi Academic Salons, Reader Salons, etc.

Space	Original Function	Created Services
Mingde Lecture Hall, Starry Sky Creative Picture Book Museum, Audio-Video Playback Space, Music Appreciation Space, Classic Recitation Space, Leisure Reading Space, College Co-built Reading Book Bars, Shengwen Gardener Bookstore, Bokan Readers, Reading Knowledge Competitions, Everyone Discusses Literature, etc.	Supporting Reading Promotion	Reading Salons, Reading Clubs, Classic Reading Guides, Reading Appreciation Courses, Film and Television Works Guides and Appreciation, Music Appreciation and Practice, Recitation Training and Related Competitions, Listening Reading (Online and Offline), Reading Aloud

Space	Original Function	Created Services
Cultural Exhibition Hall, Mingde Lecture Hall, Ancient Books Special Collection Room, Shengwen Gardener Bookstore, Micro Ancient Books Restoration Room	Supporting Cultural Inheritance	Calligraphy, Painting and other Traditional Cultural Art Exhibitions, Ancient Book Beauty Lecture Series, Intangible Cultural Heritage On-site Displays, Traditional Culture Open Classes, Ancient Book Exhibitions, Ancient Book Restoration Experience, Tea Culture Sharing and On-site Demonstrations
Maker Gas Station, Maker Lecture Hall, Creative Discussion Area, Creative Display Area, Video Editing Space, MOOC Recording Space, New Function Experience Space	Supporting Innovation Experience	Innovation and Entrepreneurship Course Guidance, Well-known Entrepreneur Sharing, Video Short Film Production, 3D Printing Experience, New Technology Product Experience, MOOC Recording, etc.

Space	Original Function	Created Services
Information Literacy Education Space, Writing Guidance Space	Supporting Literacy Enhancement	Science Training Camps, Thesis Writing Guidance Courses and Training, Information Literacy Training, Literature Search Courses, etc.

4.3 Learning Spaces + Autonomous Learning

Since the 21st century, modern collaborative and inquiry-based learning theories represented by constructivism have prevailed in university teaching, making autonomous learning (active learning) ability the primary capability students need to possess. Autonomous learning refers to the transformation of education from a one-way teaching-learning relationship to a two-way teaching relationship focusing on discussion and debate. The cultivation of student-centered autonomous learning ability requires schools to provide more relaxed and free interactive learning environments, which is also the driving force behind the creation of university library learning commons [18]. Libraries have unique natural advantages in cultivating students' autonomous learning ability. Library learning spaces, maker spaces, and course learning spaces can provide strong support and guarantee for the entire process of developing students' autonomous learning ability. Duke University in the United States divides its dozens of spaces into four categories according to the cultivation process of autonomous learning ability: learning spaces, interview classrooms, activity spaces, and project spaces, embedding the entire process of autonomous learning ability cultivation from spatial size to facility configuration [19]. SNU Library has built six reader learning and discussion spaces accommodating 8-20 people, equipped with computers, network interfaces, projectors, electronic drawing boards, blackboards, and other equipment to promote active learning among teachers and students.

5. Development of Spatial Services: Moving Toward Smart Libraries

5.1 From Resource-Centered to Reader-Centered

Some experts have proposed the concept of the "third-generation library" as a goal for library construction and development. The third-generation library is people-oriented, focusing on human needs, accessibility, openness, ecological environment, and resource integration, and is committed to promoting knowledge circulation, innovative communication environments, emphasizing multi-element literacy, and stimulating community vitality [7]. Whether first or second generation, libraries were resource-centered, with the main spaces and best locations used for preserving literature resources, readers' reading spaces ar-

ranged around literature storage areas, and traditional workflows based on literature processing procedures. The third-generation library is reader-centered, compressing resource storage space to create reader learning, exchange, and practice spaces that meet diversified needs. Libraries have achieved "people-oriented" services by making space reengineering and spatial services their development direction in the past and will continue to carry out spatial smart service innovation based on "focusing on human needs" in the future.

5.2 From Passive Service to Active Outreach

Under traditional concepts and original spatial patterns, collection size and borrowing volume were the most important evaluation metrics for libraries, while readers' time spent in the library and ability enhancement were not considered. Therefore, simply receiving readers to complete borrowing was sufficient, placing libraries in a passive position in their relationship with readers, with focus on collection quality construction. Smart libraries shift focus from resources to readers, making readers' learning experiences and ability cultivation important benchmarks for service evaluation. The traditional model urgently needs reform, and passive service must shift to active service by creating warm, comfortable, and functionally complete new spaces to attract readers into the library and utilize it, fully proving the library's value. This is not only SNU Library's transformation path through space reengineering but should also be the reform direction for all university libraries.

5.3 From Physical Space to Smart Space

Traditional libraries only provide storage space for literature resources and reading space for readers, with single functions and limited appeal. The third-generation library will inevitably break through the limitations of architectural physical space. According to the development of the times and changes in reader needs, it will focus on creating autonomous learning spaces and smart spaces that cultivate comprehensive literacy and creative abilities, offering various courses and training activities based on space and providing rich and colorful spatial smart experiences. The third-generation library's space is thoughtful, soulful, and warm—a smart space that can self-improve and grow. This is the ultimate goal of library space reengineering.

As a recent SNU graduate said: "During our four years of university, the library is what we'll miss the most!" Although the library's characteristic space reengineering has gained reader recognition, it still lacks experience and intensity in space promotion, management, and services. Therefore, future efforts must focus on enhancing librarians' service innovation capabilities and expanding service depth. The library will continue to uphold the reader-centered, demand-driven spatial service philosophy, continuously introducing new concepts, methods, and technologies to further improve the spatial service system, explore new environments and new situations, and forge a successful path for university library space reengineering and services.

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Author Contributions

Lu Quan: Conceived research ideas and outline, revised manuscript draft.
Hu Yongqiang: Collected and organized materials, wrote manuscript, revised manuscript.
Wang Yu: Revised manuscript.

Research on Space Reengineering and Service Innovation of University Library

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Abstract: [Purpose/significance] By summarizing the practice and experience of library space reconstruction in Shenyang Normal University, this paper provides a reference for the current library space reconstruction in Shenyang Normal University to break through the service bottleneck and realize the successful transformation. [Method/process] Taking the case of library space reengineering and space service as an example, this paper summarizes the concept and volume of university library space reengineering, as well as the main idea and strength of space service based on space reengineering, and puts forward the development direction of library space service. [Result/conclusion] Shenyang Normal University library has accumulated rich experience in space reengineering and the cognition and practice of space service, which provides a reference for other university libraries to successfully carry out space reengineering and has high feasibility.

Keywords: university libraries; space reengineering; service transformation; administering the space

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