

## **IFLA and U.S. Library Space Planning Guidelines and Implications: Postprint**

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**Date:** 2023-04-01T16:15:59+00:00

### **Abstract**

[Purpose/Significance] This study aims to investigate and analyze the overview and content of foreign library space planning guidelines, providing reference and inspiration for the development of library space planning and guidelines in China. [Method/Process] The web survey method was employed to obtain library space planning guidelines from the International Federation of Library Associations and Institutions (IFLA) and the United States, and the content analysis method was used to analyze seven thematic guidelines on library space planning across three dimensions: planning concepts and methods, planning content and elements, and planning procedures and steps. [Results/Conclusion] The library space planning guidelines from IFLA and the United States are rich in content and broad in coverage, and demonstrate high flexibility and applicability through continuous revision and improvement. Implications for formulating space planning guidelines in China include: developing library space planning guidelines based on existing standards and specifications; clarifying the compiling entities and stakeholder groups for space planning guidelines; adhering to the general procedures for compiling library space planning guidelines; and defining the core content and principles of library space planning guidelines.

### **Full Text**

#### **Preamble**

#### **IFLA and American Library Space Planning Guidelines and Their Implications**

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**Abstract:** *[Purpose/Significance]* This study aims to investigate and analyze the landscape and content of foreign library space planning guidelines to provide reference for the development of library space planning guidelines in China. *[Method/Process]* Using web surveys, we obtained space planning guidelines from IFLA and the United States, and applied content analysis to examine seven specialized library space planning guidelines across three dimensions: planning concepts and methods, planning content and elements, and planning procedures and steps. *[Result/Conclusion]* IFLA and American library space planning guidelines feature rich content, broad coverage, and high flexibility and applicability through continuous revision and improvement. Implications for developing China's space planning guidelines include: formulating library space planning guidelines based on existing standards and norms; clarifying the development bodies and stakeholder groups; following general procedures for guideline development; and identifying core content and principles.

**Keywords:** space planning guidelines; IFLA; United States; library

Library space planning guidelines are advisory documents developed by libraries, their professional associations, or supervisory authorities to guide library building space planning and design. Over the past several decades, the International Federation of Library Associations and Institutions (IFLA) and the American Library Association (ALA) along with its divisions have developed highly specific guidelines for library space planning and design. Currently, developing service planning guidelines has become a key direction for global library organizations including IFLA, which has explicitly listed the development of standards, guidelines, and other materials to support maximum development as a core element of its future strategic plan [1]. The international library community has recently placed great emphasis on the value of space in user services and transformation, conducting extensive research and practice on library space reconfiguration. China has also introduced multiple guidelines and standards for library construction and services in recent years, yet these lack a corresponding system of standards and norms at the planning and design level, particularly specialized space planning guidelines. Moreover, while formal standards require lengthy procedures from initiation to repeal, guidelines can fill this temporal gap and better guide planning practice. Analyzing American library space planning guidelines and their content, methods, and frameworks offers valuable reference for Chinese libraries to initiate research and practice on space planning guidelines.

A CNKI search using “library” + “space planning guidelines” as title keywords for the period 2010-2019 yielded zero relevant papers. Searching with “library” + “space planning” and “library” + “guidelines” revealed that current research focuses on case studies of university library space planning [2-4] and theoretical discussions of space planning design [5-6]. Studies on library guidelines primarily involve textual analysis of American copyright guidelines [7] and youth service guidelines [8], IFLA children's service guidelines [9], foreign library association senior service guidelines [10], and user privacy protection guidelines [11], with

no research on library space planning guidelines. Therefore, this paper employs web surveys to obtain IFLA and American library space planning guideline texts, using multi-case comparative study and content analysis to examine the main frameworks and content of these guidelines, aiming to provide reference for Chinese libraries to promptly and scientifically develop library space planning guidelines.

## 2. IFLA and American Library Space Planning Guidelines

To comprehensively understand library space planning guidelines, we conducted searches using Google and Bing (international version) with the query “libraries space planning guide filetype:PDF” and applied manual screening. We also visited the official websites of IFLA, ALA, and their divisions to examine lists of standards and guidelines published under sections such as “Guidelines & Standards” and “Current Standards.” After verification and deduplication, we obtained 12 specialized library space planning guidelines and several related documents.

### 2.1 Specialized Library Space Planning Guidelines

Space planning is a highly strategic and forward-looking endeavor. All library space planning must be based on each library’s specific renovation scope, budget, target users, objectives, and tasks to carry out concrete planning and design. This determines that uniform normative standards cannot fully meet and align with each library’s actual needs, requiring compliant space planning guidelines for guidance (see Table 1 ). As shown in Table 1, American space planning guidelines are developed not only by ALA and its divisions (the primary contributors and drivers) but also by education departments and architectural research institutes. Guideline types cover public libraries, academic libraries, and guidelines applicable to almost all library types, accommodating the characteristics of different library space planning. These guidelines are generally applied in library space needs assessment, facility planning, interior design, and overall evaluation processes. For example, YALSA’s *National Teen Space Guidelines* have been widely recognized and adopted by public libraries at all levels, becoming one of the most important tools for evaluating the overall success of public libraries in providing physical and virtual spaces for 12-18 year-olds.

### 2.2 IFLA and American Guidelines Related to Library Space Planning

IFLA and ALA also include requirements and recommendations for library building and space planning design in many library and service guidelines, which to some extent serve as basic references, minimum standards, and guidance materials for library space planning (see Table 2 ). Additionally, other guidelines developed by IFLA and ALA for special populations such as persons with mental illness, hearing impairments, intellectual disabilities, blindness, and other disabilities all encompass space planning content. Some American universities also

include library space planning and design in their institutional space planning guidelines, such as the *Stanford University Space and Furniture Planning Guide* [22] and the *University of Connecticut Space Planning Guidelines* [23]. These guidelines mostly provide recommendations for designing corresponding spaces for different grades and statuses of students and faculty in the “Library/Learning Facilities” section, serving as important supplementary references for university and research library space construction.

### 3. Content Analysis of Library Space Planning Guidelines

#### 3.1 Space Planning Framework and Methods

A core concept in American library space planning guidelines is the construction of hierarchical and zoned planning methods. Hierarchical planning is the central concept of *Public Library Space Planning: A PLA Guide*, which not only proposes a user data-centered hierarchical planning method but also divides library space planning design into three levels: short-term planning for immediate improvements, medium-term planning that does not involve building additions or structural changes, and long-term planning for more substantial space renovations [15]. The zoning concept and method are primarily implemented in other public library space planning guidelines.

**3.1.1 Zoning by Functional Attributes** *Public Library Space Needs: A Planning Outline* provides planning recommendations for six types of functional spaces, while the *Library Space Planning Guide* (2014 revision) focuses on this guideline and separates the space planning area, quantity, and size calculation formulas from the 2002 version into separate worksheets. Used in conjunction with the guidelines, it also proposes zoning planning frameworks for nine types of public library functional spaces. Both are highly similar to the space planning framework proposed by the National Institute of Building Sciences (NIBS), as shown in Table 3 .

**3.1.2 Classification by Spatial Form** American library space planning guidelines mostly focus on physical space planning. The latest *Public Library Space Planning: A PLA Guide* proposes division of responsibilities, user segmentation, user-time mapping analysis, and provides methods for evaluating target space uses and existing spaces, creating user space heat maps to assist planning, and effective space planning examples. YALSA’s *National Teen Space Guidelines* also addresses virtual space planning, using an integrated “physical-virtual” design approach to achieve functional integration from local functional design to overall space functionality, as shown in Figure 1 [Figure 1: see original paper] and Figure 2 [Figure 2: see original paper].

## 3.2 Space Planning Content and Elements

Libraries must consider numerous factors when planning new spaces, including location, entrances, passages, lighting, furniture, distances, colors, sound, technology, flooring, interior decoration, safety, maps, and signage. These elements are often listed separately in space planning guidelines as “considerations” or “core issues” for reference.

**3.2.1 Shelving and Furniture** Shelving and flexible furniture are core elements of interior space layout and important components of all guidelines. Guidelines generally agree that space furniture should be flexible, efficient, engaging, and safe to accommodate changes in user needs over time and fluctuations in user numbers. Some guidelines provide reference values such as aisle width between shelves and clear space at stack ends, or specify quantities and layout requirements for seating, display equipment, trash cans, service desks, clocks, telephones, and storage furniture in specific spaces.

**3.2.2 Spatial Distance** Personal space distance planning is essential for ensuring positive user experiences. *Public Library Space Planning: A PLA Guide* proposes four types of spatial distances based on social observation: intimate distance (less than 18 inches), personal distance (18 inches to 4 feet), social distance (4-8 feet), and public distance (8-10 feet), and offers suggestions for handling limited library space [15]. State library space planning guidelines focus more on providing spatial size indicators for different user seat types. For example, Connecticut’s *Library Space Planning Guide* requires 25 square feet per seat with tables, 30 square feet for study room seats, and 40 square feet for lounge chairs, with formulas for determining other user seat spaces provided in accompanying worksheets.

**3.2.3 Sound and Visual Privacy** Most guidelines treat space planning that accommodates both quiet and noisy requirements as important content, though they mostly provide textual descriptions or suggest separating reading and private work/study areas from general circulation and work areas. As collaborative work, meetings, and group activities become increasingly common in libraries, space design must accommodate growing noise while maintaining quiet spaces [7]. *Public Library Space Planning: A PLA Guide* proposes methods to enhance space flexibility: deploying movable shelves to create visual or sound barriers, dividing an area into two parts, or increasing area size to meet user needs for sound and visual privacy.

**3.2.4 Lighting, Temperature, and Ventilation** Uncomfortable conditions such as excessive heat, cold, noise, darkness, or glare not only limit reading ability but may also reduce space utilization satisfaction and aggravate disease symptoms. Some guidelines provide specific requirements in this area. For example, *WBDG Whole Building Design Guide - Public Library* explicitly requires

using furniture, materials, machinery, and electrical systems that ensure healthy indoor air and avoid carcinogens, volatile organic compounds, fungi, mold, bacteria, and other known toxins; HVAC systems must have efficient air filtration, and copy rooms and spaces that may emit toxic substances must have dedicated exhaust systems [18].

**3.2.5 Accessibility Design** American library space planning guidelines comply with relevant policies and laws for accessible space use by special populations, including the Americans with Disabilities Act, Architectural Barriers Act, Library Bill of Rights, and Rehabilitation Act, which grant special populations the right to barrier-free library space design. For example, *Library Space Planning Guide* proposes that libraries need to provide users with an accessible circulation path connecting all accessible areas within the building, including corridors, floors, ramps, elevators, lifts, and floor areas near furniture [13]. *WBDG Whole Building Design Guide - Public Library* also explicitly states that public library accessibility planning should consider various disabilities, including visual, learning, mobility, speech, and hearing impairments, and should achieve barrier-free access to physical functions, assist mobility-impaired persons in accessing any reading materials, and provide special reading assistance devices or private reading spaces [18].

### 3.3 Space Planning Procedures and Steps

Space planning is crucial in library renovation or new construction and should follow standardized procedures and steps. Connecticut State Library's various versions of *Library Space Planning Guide* provide detailed descriptions of library space planning steps, mainly including: 1) clarifying mission, tasks, and objectives; 2) analyzing the service population in the community; 3) user needs and perception analysis and current space assessment; 4) developing a full-process space construction plan (including developing a brief plan and discussing with library authorities and funding agencies, forming a functional area planning list, preparing a final space construction plan for approval, collaborating with architects on design development, cost estimation, construction documents and bidding, equipment and lighting, relocation and installation, and evaluation after the first year of use). Wisconsin's *Public Library Space Needs: A Planning Outline* identifies nine steps in the planning process in its introduction, including population calculation, collection inventory, and workspace and service space estimation. Other space planning guideline texts do not specifically list planning processes but distribute steps across chapters for more detailed space planning.

## 4. Implications for Developing China's Space Planning Guidelines

### 4.1 Base on Existing Standards and Norms

As a type of standard and norm that uniformly defines and measures things, guidelines serve to provide reference frameworks and qualitative bases for existing standards. While China has not yet issued specialized library space planning guidelines, existing documents such as *Code for Design of Library Buildings*, *Construction Standards for Public Libraries*, and *Public Library Service Standards* all contain relevant content on library space planning and design (see Table 4) and should serve as references. At this stage, the Chinese library community needs to promptly conduct relevant research and practice, and develop a space planning guideline that complies with China's current laws, regulations, and policies while meeting the practical development needs of library space planning, truly promoting the development of Chinese library space planning guidelines from scratch and from partial to comprehensive.

### 4.2 Clarify Development Bodies and Stakeholder Groups

Professor Ke Ping's *Guidelines for Library Strategic Planning Development in China* [38] states that libraries themselves are the preferred institutions for developing strategic planning texts. However, library space planning guideline development is a complex task requiring high-level collaboration among libraries, administrative departments, construction units, and interior design units. Reviewing the development history of IFLA and American space planning guidelines reveals that library associations are the main development bodies and publishers, organizing guideline development committees or working groups composed of experienced librarians and researchers to complete guideline development, promotion, and revision in collaboration with library associations at all levels, architecture and design associations, higher authorities, and external organizations.

Space planning guideline development differs from China's existing library business construction guidelines and strategic planning guidelines, featuring stronger practicality, collaboration, and interdisciplinary characteristics. Therefore, development must particularly emphasize joint efforts with forces outside libraries to determine quantitative indicators and planning methods. At all stages of development, relevant stakeholder groups should be broadly included: 1) professional architecture design associations and research institutes, which should ensure participation from other relevant departments or units and consult external groups such as professional associations in education or technology, government agencies, or technical institutions when developing standards or guidelines that meet ALA requirements [39]; 2) library space users, especially children, teenagers, and seniors with different ages and utilization needs, to ensure space planning and design fully reflects different user groups' wishes and demands; 3) influential individuals, scholars, or relevant research groups—the author of the

latest American *Public Library Space Planning: A PLA Guide*, D. Vinjamuri, is an assistant professor at New York University and a marketer.

### 4.3 Follow General Development Procedures

Chinese associations, departments, and committees, or library space project leaders should first clarify the development process when developing library space planning guidelines. Reviewing China's existing library guidelines reveals that their development requires support from higher authorities and standardized processes. American library space planning guidelines focusing on overall library building and interior space planning generally include three main parts: 1) Preparation phase: initiating and appointing a guideline development committee or working group, determining the guideline's name, scope, and audience, and reviewing and assessing existing relevant research. 2) Implementation phase: developing guideline working documents (including name, objectives, personnel, funding, practices, terminology, audience, content, outline, methods, principles, indicators, and reference resources), soliciting opinions, conducting feasibility reviews, allocating draft development work according to timelines, and drafting, releasing, and soliciting opinions on drafts, ultimately forming, submitting, reviewing, approving, and releasing the guideline. 3) Refinement phase: revising and repealing the guideline according to changing realities. In this process, fully drawing on existing library space planning practice and theoretical research is an important part of preliminary investigation. IFLA and American library space planning guidelines, Chinese library space planning practice analyses [2-4, 40] and theoretical research [5-6, 41], and external resources such as the American Building Research Information Knowledgebase (BRIK) [42], AIA/ALA Library Building Awards [43], and resource pages [44] and resource lists [45] provided by NIBS/ALA offer important theoretical support and practical foundations for developing library space planning guidelines that fit China's cultural background and development stage.

### 4.4 Clarify Core Content and Principles

Clarifying guideline framework content is important work in developing Chinese library space planning guidelines. Based on research findings, relevant institutions and organizations should consider four aspects when developing Chinese library space planning guideline documents: 1) In content design, besides clarifying planning requirements and methods for furniture, shelving, sound, temperature, lighting, ventilation, visual privacy, and equipment, corresponding worksheets should be provided, along with space planning practice cases, reference resources, and bibliographies in appendices. 2) Follow general space planning objectives and principles, including the eight objectives proposed by *WBDG Whole Building Design Guide*: accessibility, aesthetics, cost-effectiveness, functionality/operability, historic preservation, productivity, safety, and sustainability [46], while complying with openness, accessibility, green, and human-centered principles reflected in other guidelines. 3) Guideline development is not a one-

time effort but a continuous process of revision and improvement according to social and historical changes. Many foreign library space planning guidelines have undergone lengthy refinement processes; for example, American *Library Space Planning Guide* evolved from its original 1986 version through revisions in 1989, 1996, 1999, 2001, 2002, and 2011 to form a relatively specific and operational local public library space planning guideline, and was later revised in 2014 and 2017 referencing *Public Library Space Needs: A Planning Outline*. 4) Explore planning concepts that suit China's national conditions and current library development stage, such as making "space promoting reading" a core guiding concept to strengthen libraries' function of providing places suitable for and encouraging reading, writing, and research, and promoting the in-depth development of nationwide reading and reading promotion.

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