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## Organizational Climate Types and Baseline Research Postprint of Chinese University Libraries

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**Date:** 2023-04-01T16:15:50+00:00

### Abstract

[Purpose/Significance] This study delineates the typological categories and assessment baselines of organizational climate in Chinese university libraries, providing a reference framework for self-assessment of organizational climate within these institutions.

[Method/Process] A nationwide sampling survey of organizational climate was conducted across university libraries, with all staff members from 11 libraries in Jiangsu Province selected for assessment. Based on the current status of organizational climate in Chinese university libraries, the characteristics of each participating library's organizational climate, and their respective developmental levels, cluster analysis was employed to classify library organizational climate and establish its baseline.

[Results/Conclusion] The organizational climate of Chinese university libraries can be categorized into three types: neutral, stimulating, and high-performance.

### Full Text

## Research on Organizational Climate Types and Baselines of University Libraries in China

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### Abstract

[Purpose/Significance] This paper defines the hierarchical types and assessment baselines of organizational climate in Chinese university libraries, providing a reference basis for self-assessment of organizational climate in university

libraries. **[Method/Process]** A nationwide sampling survey of organizational climate in university libraries was conducted, selecting all staff members of 11 libraries in Jiangsu Province for organizational climate assessment. Based on the current status of organizational climate in Chinese university libraries, the characteristics and development levels of each participating library, cluster analysis was used to classify library organizational climate and define its baseline. **[Result/Conclusion]** The organizational climate of university libraries in China can be divided into three types: neutral, stimulating, and efficient.

**Keywords:** university library; library organizational climate; organizational climate type

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With increasing investment of funds, technology, and human resources in university library construction, library management has become increasingly complex and important. Organizational health theory posits that if an organization possesses a healthy and harmonious organizational climate, employees' positive work attitudes and behaviors will be effectively stimulated, thereby significantly improving performance and service quality [1]. Research on organizational climate in the library field originated from the affirmative action movement in the American library community in the 1970s [2]. This movement aimed to increase the proportion of minority practitioners and promote cultural diversity in libraries. Subsequently, diversity initiatives gradually expanded from racial diversity to include gender, religion, sexual orientation, language, and cross-cultural communication. In 1998, B.J. Love proposed assessment methods for diversity in academic libraries [3]. In 1999, the library community officially recognized organizational climate as a research area, and libraries began participating in the ClimateQUAL® assessment [5].

Chinese scholars began paying attention to library organizational climate in 2010. Research has progressed from the introduction, applicability analysis, and localization of ClimateQUAL®, to foundational theoretical studies on library organizational climate, such as conceptual analysis [1], development trajectories, and formation mechanisms [6]; to assessment-related research, such as measurement scales [7], evaluation methods [8], assessment processes, and data quality control methods [9]; and further to effect studies on organizational climate, such as its impact on organizational performance and librarians' attitudes and behaviors [10]. Research demonstrates that library organizational climate is positively correlated with service quality [11] and user satisfaction, consistent with findings from Cornell University Library in the United States [12]. Studies on library organizational climate in China are gradually forming a comprehensive evaluation system.

Due to cultural differences between East and West, American research has focused more on the relationship between library diversity and organizational climate, establishing the Organizational Climate and Diversity Assessment (OCDA) [4]. Through continuous development, the concept of organizational

climate has gradually gained attention, the concept of diversity has been de-emphasized, and OCDA was renamed ClimateQUAL® in 2009. For ten years, the Association of Research Libraries (ARL) in the United States has conducted sustained in-depth research and practice, achieving numerous research outcomes and improving library management levels and service quality. Under ARL's promotion, library organizational climate assessment has rapidly spread throughout Western countries. By early 2019, 57 libraries in the United States, 4 in the United Kingdom, and 2 in Canada had participated in the ClimateQUAL® assessment [5].

Through this development, the concept of organizational climate has increasingly emphasized management justice and interpersonal harmony. Currently, some university libraries have spontaneously conducted organizational climate assessments [13], identifying weaknesses in management and adjusting management approaches and leadership styles, thereby improving internal organizational climate and further enhancing library service quality. However, from a practical assessment perspective, systematic implementation experience in China remains very limited, with few libraries independently conducting organizational climate assessments. Even when individual libraries conduct self-evaluations, the lack of a reference standard for value judgment makes it difficult to determine the library's relative position.

In the business management field, to differentiate relationships between various levels of organizational climate and organizational performance, organizational climate is typically classified into four types: efficient, stimulating, neutral, and negative [14]. Regardless of how many dimensions and items a scale contains, results can be described using this framework, which is also adopted by Gallup's organizational climate scale. In library organizational climate research, however, no studies have reported on organizational climate types and their assessment criteria. Therefore, this paper attempts to establish a measurement benchmark for library organizational climate assessment results through empirical research in a sample of libraries, classifying library organizational climate and defining a value judgment baseline for each category. The baseline in this study represents a relative and dynamically evolving value range for defining library organizational climate types, which can serve as a reference for libraries conducting self-assessments. Libraries undertaking self-assessment can compare their results with the baseline to identify their organizational climate type and level, clarify existing problems, propose targeted management improvements, and ultimately enhance service quality and effectiveness.

## 2 Research Design

### 2.1 Research Approach

First, university librarians were surveyed as respondents in a nationwide sampling survey to understand the current average development level of organizational climate in Chinese university libraries and establish an average baseline.

Second, after determining the average baseline, a range baseline was established. Because Chinese university libraries are numerous and exhibit significant imbalance in organizational climate characteristics and development levels, a single average baseline cannot meet all needs. Some libraries have established comprehensive management policies, emphasize staff professional growth, advocate learning and innovation, and foster harmonious organizational climates; others have numerous management problems, lack humanistic care, neglect support for staff growth, and create lax atmospheres; still others manage well in some aspects but require improvement in others. Therefore, this study selected 11 libraries for organizational climate assessment of all staff members. Combining nationwide survey results with relationships among participating libraries' results, cluster analysis was used to define several library organizational climate types and their assessment baselines.

## 2.2 Data Collection

**2.2.1 Data Collection Platform** To protect the privacy of libraries and librarians, the research team developed a proprietary “Organizational Climate Assessment System” for data collection. The “Library Organizational Climate Assessment System” features questionnaire design, distribution, and data collection functions, and can process and analyze collected data. To ensure response rates, this survey supplemented the system with the “Questionnaire Star” platform and traditional paper questionnaires.

**2.2.2 Scale Design** Currently, the ClimateQUAL® assessment scale is undoubtedly the most authoritative library organizational climate evaluation index system globally. Its complete version includes 9 organizational climate indicators and 7 organizational attitude indicators [15], totaling approximately 150 items and requiring 20-40 minutes to complete. However, ClimateQUAL® was designed based on Western cultural contexts, making many indicators inapplicable in Chinese cultural contexts, and its length is unsuitable for China's national conditions. Library organizational climate measurement must consider both cultural differences and the characteristics of libraries as non-profit service organizations centered on users to provide specific guidance for library management practice. Therefore, this study reconstructed the library organizational climate assessment scale by referencing relevant ClimateQUAL® indicators, combining local cultural and practical characteristics, and employing grounded theory methodology.

First, raw data were collected through one-on-one semi-structured in-depth interviews (12 expert interviews), focus group discussions (5 groups), open-ended questionnaires, and literature review. This yielded 518 initial concepts. Through open coding (integrating 39 constructs), selective coding (obtaining 15 sub-categories), and theoretical coding (forming 6 core dimensions), the basic content structure of library organizational climate was finalized as 6 dimensions: management justice, innovation encouragement, development support, job sat-

isfaction, interpersonal harmony, and responsibility consciousness, totaling 39 items. After pilot testing with the original scale and conducting exploratory and confirmatory analyses, 34 items were retained.

All items used a 5-point Likert scale: 1 = “strongly disagree,” 2 = “disagree,” 3 = “neutral,” 4 = “agree,” 5 = “strongly agree.”

**2.2.3 Sampling Method for National University Library Organizational Climate Survey** The national survey employed convenience sampling within random sampling methods. Questionnaires were distributed through: (1) on-site distribution at university library conferences and forums; and (2) online distribution through national librarian QQ and WeChat groups. After deleting invalid questionnaires with obvious errors or missing data, 1,054 valid questionnaires were obtained.

**2.2.4 Selection of Surveyed Libraries and Data Collection** Spanning the Yangtze and Huai River basins, Jiangsu Province embodies both northern and southern cultural characteristics. With numerous universities and diverse types and levels of university libraries, this study selected 11 representative university libraries from different regions of Jiangsu (southern, central, and northern), including different types (finance and economics, medical, agricultural, science, liberal arts, engineering, mining, and comprehensive) and levels (2 “985” universities, 3 “211” universities, 4 regular undergraduate institutions, and 2 vocational colleges). As a third-party researcher, invitations were sent to the 11 libraries. After obtaining support from library leadership, each library designated a coordinator. Through internal promotion, mobilization, training, and implementation, 438 valid questionnaires were obtained.

### 2.3 Data Analysis Methods

Cluster analysis is a common data mining method that classifies unlabeled data objects according to certain criteria, grouping similar objects together and separating heterogeneous objects to determine each object’s category [16]. Since library organizational climate types cannot be predetermined, this study employed the agglomerative algorithm in hierarchical clustering. As this study used a 5-point Likert scale to measure library organizational climate, Euclidean distance was used to calculate similarity between libraries’ organizational climates.

## 3 Data Analysis

Before data analysis, reliability and validity tests were conducted. Reliability analysis showed the overall scale’s Cronbach’s alpha was 0.972, with dimensional alphas ranging from 0.865 to 0.934, all exceeding the 0.7 standard. Construct validity was tested through exploratory and confirmatory factor analysis, with

all fit indices meeting required standards. These results indicate the library organizational climate scale has good reliability and validity, and its measurement model fits the sample data well.

### **3.1 National University Library Organizational Climate Survey Results**

**3.1.1 Sample Characteristics** Demographic statistics for participating librarians are shown in Table 1 . The male-to-female ratio was 3:7, with female librarians significantly outnumbering males, consistent with current gender composition in Chinese libraries [17]. Librarians with bachelor's and master's degrees accounted for 91% of respondents; those aged 31-50 represented 67%; librarians with intermediate and senior professional titles comprised 75%; formally appointed staff accounted for 84%; general librarians represented 65%; and librarians from regular institutions accounted for 58%. The sample covered all regions of China (Northeast, East China, North China, Central China, South China, Southwest, and Northwest), with the largest samples from East and North China. Overall, the sample distribution was balanced and representative.

**3.1.2 Overall Situation** Survey results indicate that organizational climate scores in Chinese university libraries center around 3 (see Figure 1 [Figure 1: see original paper]). Librarians rated “responsibility consciousness” relatively high, though not reaching 4 (“agree”); innovation encouragement and interpersonal harmony were next; while management justice, development support, and job satisfaction received lower ratings. Specifically: (1) librarians generally believe they have strong responsibility consciousness and are willing to expend extra time and effort to improve service quality; (2) the rationality and implementation of library management systems need improvement, especially regarding distribution systems and grievance channels when librarians perceive injustice; (3) library leaders encourage innovation but lack effective policies and systems; (4) libraries show insufficient attention to librarians’ professional growth (training and learning); (5) promotion pathways are limited and their fairness is questioned; and (6) interpersonal relationships are relatively harmonious, but librarians seldom feel organizational care.

### **3.2 Analysis of University Library Organizational Climate Types and Baselines: A Case Study of Jiangsu Province**

**3.2.1 Sample Data and Description** Participation rates in the 11 Jiangsu university libraries all exceeded 70% of total staff. Sample characteristics are shown in Table 2 . Results show both broad consistency and local diversity in Jiangsu libraries’ organizational climate. As Figure 2 [Figure 2: see original paper] demonstrates, average scores across all participating Jiangsu libraries generally follow the same pattern as the national survey, indicating similar management strengths and weaknesses and suggesting common issues in Chi-

nese university library management. However, significant gaps and differences exist between individual libraries. Therefore, based on each library's organizational climate characteristics and development level, cluster analysis was used to group libraries with similar climate levels and differentiate those with larger gaps, thereby classifying library organizational climate into hierarchical types. Using the six dimensions of university library organizational climate as analysis variables, cluster analysis was performed on the 11 libraries.

**3.2.2 Clustering Results** Hierarchical clustering begins with each sample as a separate cluster, calculates distances between clusters, merges the closest pair, recalculates distances, and repeats until all libraries form one cluster. This study's clustering principle ensured high similarity within clusters and large gaps between clusters, guaranteeing within-cluster homogeneity and between-cluster heterogeneity for effective type identification. The cluster dendrogram is shown in Figure 3 [Figure 3: see original paper]. To validate results, one-way ANOVA tested for significant differences among the three organizational climate types. Results showed significant differences, indicating acceptable clustering effectiveness.

Based on the dendrogram, the 11 Jiangsu libraries were classified into three types: Library A (lowest level) as a separate cluster; Libraries B, C, D, E, F, and G (medium level) as one cluster (6 libraries); and Libraries H, I, J, and K (higher level) as one cluster (4 libraries). Library A's dimensional averages closely match the national survey mean, representing the general development level of Chinese university library organizational climate. This is termed the **neutral** type. The higher-level type is called **stimulating**, and the highest-level type **efficient**. As Figure 4 [Figure 4: see original paper] shows, dimensional averages increase from inner to outer circles across the three types. Overall, the three types show no overlapping averages, though baseline ranges for interpersonal harmony and responsibility consciousness overlap slightly. Unlike the four business organizational climate types, only three types emerged for university libraries, with no negative type observed—likely due to the special nature of these non-profit organizations where negative climates rarely exist. The three-level classification better fits university library realities.

**3.2.3 Analysis of Library Organizational Climate Types (1) Neutral Organizational Climate.** Library A represents the neutral type, closely matching the national average. Baseline ranges are shown in Table 3, with management justice, development support, and job satisfaction averaging around 3.2; innovation encouragement around 3.3; interpersonal harmony around 3.5; and responsibility consciousness higher at around 3.9.

Neutral climate characteristics include: management policies and implementation fairness need improvement, lacking grievance channels; leaders encourage and appreciate innovative librarians but provide no substantive support; librarians question leaders' competence and working methods; interpersonal harmony

is superficial with weak closeness; librarians' organizational identification and belonging need improvement; librarians generally believe service quality should improve but lack motivation. In neutral climates, librarians cannot perform optimally, and organizational climate improvement could significantly enhance work attitudes and behaviors.

**(2) Stimulating Organizational Climate.** Libraries B, C, D, E, F, and G represent the stimulating type. As Table 4 shows, baseline ranges score higher across all six dimensions than the neutral type: management justice, development support, and job satisfaction average around 3.5; innovation encouragement around 3.6; interpersonal harmony and responsibility consciousness around 3.9.

Stimulating climate characteristics include: relatively fair management with grievance channels; some learning and training opportunities but promotion fairness needs improvement; leaders encourage innovation, provide resources and support, and allow trial-and-error costs but lack effective reward systems; librarians recognize leaders' competence and achieve some work satisfaction; interpersonal relationships are relatively harmonious with mutual assistance; librarians have strong responsibility consciousness and work enthusiasm with organizational identification and belonging. In stimulating climates, librarians complete assigned tasks to the best of their ability.

**(3) Efficient Organizational Climate.** Libraries H, I, J, and K represent the efficient type. As Table 5 shows, baseline ranges score high across all dimensions: management justice, development support, and job satisfaction average around 3.7; innovation encouragement near 3.9; interpersonal harmony near 4.0; and responsibility consciousness around 4.2.

Efficient climate characteristics include: fair management with reasonable policies and systems and equitable promotion; emphasis on librarians' careers with diverse learning, training, and exchange opportunities; reward systems for innovation; genuine care for librarians resulting in high job satisfaction; very harmonious interpersonal and superior-subordinate relationships; strong responsibility consciousness and work enthusiasm; strong organizational identification and belonging; willingness to spend personal time learning job-related skills and knowledge; and frequent contributions to library development suggestions. In efficient climates, librarians are fully committed and willing to contribute their utmost to library development.

This study classifies library organizational climate into three types—neutral, stimulating, and efficient—and establishes corresponding assessment baselines. Efficient and stimulating climates yield high librarian and user satisfaction and represent desirable states, while neutral or lower-level climates produce lower satisfaction and require improvement. Our research team compared Library E's stimulating climate data with similar libraries to identify management weaknesses and implemented targeted interventions. After one year, Library E's climate improved significantly, moving from typical stimulating toward efficient.

This demonstrates that the climate types and baselines developed in this study can effectively help libraries identify improvement directions and provide practical management guidance.

The classification and baseline establishment are based on current development levels and characteristics of Chinese university library organizational climates, evolving dynamically with climate development and maintaining objectivity and dynamism. Currently, limited participating libraries mean the classification and baselines have room for refinement and optimization. As more libraries participate, more refined classifications may emerge. Over time, as organizational climates improve, assessment baselines may trend upward.

Reasonable self-assessment is an effective library management improvement tool, achieving self-enhancement through self-analysis and understanding. This study provides theoretical and empirical research with developed assessment baselines to support comprehensive self-evaluation. More libraries should independently conduct organizational climate assessments as a management decision-support tool integrated into daily operations, ultimately creating healthy, harmonious climates that improve service quality.

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#### **Author Contributions:**

Bao Ping: Research design and writing guidance;

Huang Sihui: Data collection, data analysis, and paper writing;

Hu Xiaohui: Data collection.

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### **Research on the Organizational Climate Type and Baseline of University Libraries in China**

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**Abstract:** [Purpose/significance] This paper defines the hierarchical types and baselines of organizational climate of university libraries in China, provides a value judgment and reference basis for self-assessment of university library organizational climate. [Method/process] A nationwide survey of the library organizational climate was conducted, and 11 libraries were selected to take

assessment. According to the current situation, the characteristics and development level of the participating libraries, the clustering analysis method was used to classify and define the baseline. [Result/conclusion] The organizational climate of university libraries in China can be divided into three types: neutral, stimulating and efficient.

**Keywords:** university library; library organizational climate; organizational climate type

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

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