



# Visualization Analysis of Research Hotspots in Library Organizational Culture Based on CiteSpace

# Análisis de visualización de los puntos calientes de investigación en la cultura organizacional de las bibliotecas basado en CiteSpace

Haidong Sun<sup>1</sup> , Xuan Zhu<sup>1</sup>

<sup>1</sup>Thai-Chinese International School of Management (TCISM). University of the Thai Chamber of Commerce. Bangkok, Thailand.

**Cite as:** Sun H, Zhu X. Visualization Analysis of Research Hotspots in Library Organizational Culture Based on CiteSpace. Salud, Ciencia y Tecnología - Serie de Conferencias. 2025; 4:1507. https://doi.org/10.56294/sctconf20251507

Submitted: 14-08-2024

Revised: 20-12-2024

Accepted: 06-03-2025

Published: 07-03-2025

Editor: Prof. Dr. William Castillo-González

Corresponding author: Haidong Sun 🖂

### ABSTRACT

**Introduction:** this study explores the current status and development trends of research on library organizational culture in China, identifying key research hotspots and their evolution. Understanding these trends provides valuable insights into optimizing library management, enhancing knowledge-sharing mechanisms, and promoting sustainable service development.

**Method:** the data were collected from the China National Knowledge Infrastructure (CNKI) database, covering the years 2004 to 2023, with 582 journal articles included in the analysis. CiteSpace software was used for keyword co-occurrence, keyword clustering, timezone visualization, and burst detection to identify research trends.

**Results:** the findings reveal that organizational culture construction is a central theme in improving library efficiency and employee satisfaction. Research on knowledge management and tacit knowledge emphasizes the importance of effective knowledge sharing and transfer for innovation. The concept of learning organizations highlights the role of continuous learning in strengthening library capabilities. Additionally, studies on human resource management focus on improving librarians' professional development, while library management and innovation research explores strategies to enhance operational efficiency and service quality. Public cultural services have also gained attention, particularly in the context of digital transformation, which has expanded libraries' social functions and improved service accessibility.

**Conclusions:** this study provides a comprehensive overview of research on library organizational culture, revealing its core themes and developmental trends. The findings serve as a reference for future research and practical improvements in library operations, supporting innovation, professional development, and enhanced public service functions.

Keywords: Library; Organizational Culture; CiteSpace; Research Hotspots.

# RESUMEN

**Introducción:** este estudio explora el estado actual y las tendencias de desarrollo de la investigación sobre la cultura organizacional en bibliotecas en China, identificando los principales focos de estudio y su evolución. Comprender estas tendencias proporciona información valiosa para optimizar la gestión bibliotecaria, mejorar los mecanismos de intercambio de conocimientos y promover el desarrollo sostenible de los servicios.

**Método:** los datos se recopilaron de la base de datos China National Knowledge Infrastructure (CNKI), abarcando los años 2004 a 2023, con 582 artículos de revistas incluidos en el análisis. Se utilizó el software

© 2025; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https:// creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada CiteSpace para el análisis de co-ocurrencia de palabras clave, agrupación de palabras clave, visualización de zonas horarias y detección de explosiones.

**Resultados:** los hallazgos revelan que la construcción de la cultura organizacional es un tema clave para mejorar la eficiencia y satisfacción del personal bibliotecario. La investigación sobre gestión del conocimiento y conocimiento tácito destaca la importancia del intercambio y la transferencia de conocimientos para fomentar la innovación. El concepto de organizaciones que aprenden enfatiza el aprendizaje continuo como estrategia para fortalecer las capacidades bibliotecarias. Además, la gestión de recursos humanos se centra en mejorar el desarrollo profesional de los bibliotecarios, mientras que la innovación en la gestión bibliotecaria busca optimizar la eficiencia operativa. Los servicios culturales públicos han ganado importancia, especialmente en el contexto de la transformación digital, ampliando la función social de las bibliotecars y mejorando la accesibilidad de los servicios.

**Conclusiones:** este estudio proporciona una visión integral de la investigación sobre la cultura organizacional en bibliotecas, revelando sus temas principales y tendencias. Los resultados sirven como referencia para futuras investigaciones y mejoras en la gestión bibliotecaria, apoyando la innovación, el desarrollo profesional y el fortalecimiento de los servicios públicos.

Palabras clave: Biblioteca; Cultura Organizacional; CiteSpace; Focos de Investigación.

#### **INTRODUCTION**

With the rapid development of information technology and the rise of the knowledge economy, libraries have become increasingly important in higher education and social development.<sup>(1)</sup> Libraries are not only centers for the storage and dissemination of knowledge but also carriers of cultural heritage and innovation.<sup>(2)</sup>

In this context, library organizational culture has become a highly focused research area. Organizational culture not only influences the internal management and staff behavior of libraries but also has a significant impact on their service quality and innovation capabilities. The development of information technology has profoundly changed the ways and content of library services, with traditional library service models gradually being replaced by digital and networked services, and the management and utilization of information resources becoming more diverse and complex.<sup>(3)</sup> The rise of the knowledge economy has made libraries increasingly important as nodes for knowledge dissemination and innovation. In this situation, libraries not only need to provide high-quality information resources but also need to foster a positive organizational culture that stimulates the creativity and innovative spirit of their staff to better serve the development needs of society.

#### **Research Objectives**

In this context, this study aims to analyze the research hotspots in the field of library organizational culture using CiteSpace, based on data from the CNKI database, to reveal the main research themes and their evolutionary trends in this area. Specifically, the objectives of this study are as follows:

1. Identify the main research hotspots in library organizational culture: By using keyword co-occurrence and clustering analysis, the study aims to clarify the main research themes in the field of library organizational culture.

2. Analyze the temporal evolution of research hotspots: Utilizing timezone maps, the study explores the trends of research hotspots over different periods, revealing emerging research directions.

3. Identify burst terms and frontier issues: Through burst term analysis, the study aims to determine keywords with a sharp increase in research interest during specific periods, uncovering new hotspots and frontier issues in the field of library organizational culture.

By analyzing the current state and evolutionary trends of library organizational culture, this study can provide valuable references for library managers, helping them better understand and shape organizational culture to enhance management levels and service quality. Additionally, this research can offer guidance to library staff, helping them better adapt to and integrate into the organizational culture, thereby improving job satisfaction and career development.

#### Literature Review

library organizational culture refers to the unique set of values, beliefs, norms, and habits that form within the specific organizational environment of a library. Organizational culture not only reflects the management style and service philosophy of the library but also manifests in the behavioral patterns and interaction styles of its staff. It is a form of collective cognition that influences both internal management and external service quality of the library.<sup>(4)</sup> Library organizational culture encompasses multiple levels, from the surface-level material culture, such as the library's architectural design and internal environment, to the deeper values and beliefs, such as respect for knowledge and commitment to user service.<sup>(5)</sup>

Currently, based on an analysis of literature related to library organizational culture in the CNKI database, Chinese scholars have systematically reviewed and summarized research in this field. Most studies focus on the macro level, interpreting the main content, specific roles, opportunities, challenges, and development strategies of library organizational culture construction by analyzing the characteristics of the literature. However, at the micro level, existing research results lack in-depth analysis of specific issues.

Cong et al. studied the mission and responsibility of public libraries in the long-term preservation of digital heritage, exploring the impact of the digital heritage community and the metaverse on public libraries.<sup>(6)</sup> They pointed out that with the rapid development of digital technology, public libraries need to play a more active role in the protection of digital heritage to ensure its long-term preservation and utilization. However, their research process remains limited to theoretical discussions and lacks in-depth analysis of practical operations and specific issues. For example, during the digital transformation process, how to specifically implement cultural protection measures and how to address challenges brought by technological changes are not fully discussed.

Jing et al. explored public library reading promotion strategies from the perspective of cultural heritage, arguing that effective reading promotion strategies can enhance public cultural literacy and reading interest, thereby promoting the transmission and development of culture. However, this study mainly relies on the theoretical framework of cultural heritage and literature review, lacking analysis of actual cases and data.<sup>(7)</sup> This single approach may limit the broad applicability of the research results.

Li et al. discussed the cultural elements in the construction of library, information, and archival science disciplines in the new era, pointing out that the construction of disciplinary culture is an important aspect of disciplinary development.<sup>(8)</sup> However, their research mainly targets the development situation of disciplines in China, lacking comparative analysis of library organizational culture in other countries and cultural contexts, thereby limiting the international applicability of the research results.

At the methodological level, Chinese scholars primarily use literature analysis, questionnaire surveys, case studies, and interviews. The research methods mentioned in these literature abstracts include literature review, quantitative and qualitative analysis, case studies, and empirical research. For instance, Xia.reviewed the current practices of public reading services in rural areas abroad through literature research .<sup>(9)</sup> However, individual case studies from abroad are insufficient to reflect the general situation of different regions and types of libraries in China, thus limiting the generalizability of the conclusions.

Wang et al. studied the mechanism of how organizational culture in public libraries influences service innovation using a questionnaire survey method based on model hypotheses.<sup>(10)</sup> However, since the research samples primarily came from public libraries in Shanghai and Zhejiang Province, there is a lack of representativeness for public libraries in other provinces and cities as well as other types of libraries. Tan et al. presented at the second "Global Perspective: University Library Directors Forum," providing a review and analysis of reports from more than ten speakers on three main themes. They summarized the academic achievements of the forum and the development trends of related research topics.<sup>(11)</sup> This is a conference review method that mainly relies on literature review and theoretical framework analysis, lacking effective support from actual data. Additionally, some other empirical studies did not fully consider the interactions between different variables during data analysis, affecting the accuracy of the research results.

In this context, introducing CiteSpace for data visualization research is particularly important for the study of library organizational culture. As a bibliometric analysis tool, CiteSpace can help scholars identify research hotspots, trends, and knowledge structures, revealing connections and evolutionary paths between different studies through visual maps. This not only compensates for the limitations of traditional literature analysis methods but also provides new perspectives and methods for researchers, enhancing the systematicity and scientificity of the research, and thereby promoting further development in the field of library organizational culture.

# METHOD

#### Research Methods

Bibliometrics is a quantitative research method based on bibliographic data, widely applied in scientometrics and information science fields. This method reveals the development trends and research hotspots in a field by statistically analyzing various bibliometric indicators such as the number of publications, citations, and keyword co-occurrence.<sup>(12)</sup> This study primarily uses keyword co-occurrence, cluster analysis, burst term detection, and timezone views to reveal the structure, main topics, research hotspots, and trend changes in the research field.

#### Research Tools

CiteSpace, developed by Professor Chaomei Chen, is a bibliometric analysis and visualization software specifically designed to analyze trends and patterns in scientific literature.<sup>(13)</sup> CiteSpace can handle large volumes of bibliographic data and generate various types of knowledge maps, such as citation networks, keyword co-occurrence networks, and collaboration networks. Through these knowledge maps, researchers

can intuitively understand the hotspots, frontiers, and evolutionary trends of a research field.

#### Data Collection and Processing

In this study, a literature search was conducted in the China National Knowledge Infrastructure (CNKI) database to systematically analyze the current status and development trends of research on library organizational culture in China. The search criteria were set as the subject: "organizational culture" AND "library" (exact match), with a time span from 2004 to 2023, and limited to journal articles. The search date was June 10, 2024. After screening, a total of 582 relevant documents were retrieved. These documents provide a rich data foundation for in-depth exploration of library organizational culture, helping to reveal research hotspots and evolutionary trends in this field and providing important references for subsequent research.

#### RESULTS

#### Keyword Co-occurrence

The keywords of a paper can succinctly summarize and reflect the core themes of the research. Multiple keywords in the same article form logical associations, and analyzing the frequency of these keywords can reveal research hotspots in the field, helping other scholars quickly find articles related to their topics during searches.<sup>(14)</sup> In a keyword co-occurrence map, keywords are represented by circular nodes, with larger nodes indicating higher frequency of occurrence, suggesting the keyword's significant role in the research field. Additionally, the thickness of the lines connecting keywords indicates the strength of their association; thicker lines represent stronger connections between keywords.<sup>(15)</sup> Analyzing high-frequency keywords in research literature can effectively capture the hotspots and development trends in the research field.

Based on the statistical analysis using CiteSpace 5.7.R5, a total of 598 records were extracted, and the merged network included 519 nodes and 836 links. To determine the research value of high-frequency keywords, this study calculated the centrality of the top 20 keywords, as shown in table 1. In addition to the keywords "library" and "organizational culture" mentioned in the title, other high-frequency keywords included "knowledge management," "library management," "library culture," "librarians," and "campus culture." The high centrality of these keywords reflects the diversity and complexity of research on library organizational culture.

Based on the keyword co-occurrence map in figure 1, the nodes for "library," "public library," "organizational culture," and "university library" stand out prominently, reflecting their high frequency of occurrence and highlighting their central role in this field of research. Other nodes are organized around these core nodes, with connecting lines linking them to other key topics such as "knowledge management," "librarians," "innovation," "learning organization," and "public cultural services." This layout vividly demonstrates the diversity and breadth of the research. These studies cover a range of topics from basic services to advanced management and innovation, providing a comprehensive perspective on the role and impact of libraries in modern society.

#### Keyword Cluster Analysis

Simple co-occurrence analysis may not fully reveal the deeper relationships and structures among keywords. To gain a more in-depth understanding of the intrinsic connections between keywords, keyword cluster analysis is employed. This method categorizes and groups co-occurring keywords, effectively revealing the thematic structure and research directions within the literature (Chen, 2017). Through this approach, researchers can identify clusters of different themes and the interrelationships among these themes, providing a more systematic and intuitive perspective for further research.

When conducting cluster analysis in CiteSpace, the Modularity (Q value) and Silhouette coefficient (S value) for each cluster can be calculated, which are indicators used to measure the quality of the clustering. A higher Modularity Q value indicates better clustering within the network. When Q > 0.3, the clustering result is considered significant and effective. The Silhouette value assesses the clustering effect, where a value closer to 1 reflects higher homogeneity within the network; a Silhouette value of 0.7 indicates high reliability of the clustering results, and a value above 0.5 is considered reasonable for clustering results.

In this study, the Log-Likelihood Ratio (LLR) algorithm was chosen, resulting in the keyword cluster map shown in figure 2. The Modularity (Q value) of the cluster map is 0,8943, and the Silhouette coefficient (S value) is 0,9846. The Q value being close to 1 indicates that the clustering structure is very clear, and the clustering of keywords is significantly effective. The S value being close to 1 suggests that the keywords within clusters have very high homogeneity and independence, demonstrating high reliability and credibility of the clustering results.

Figure 2 showcases multiple clusters in different colors, with each cluster representing an independent thematic area, revealing the cluster distribution of current research themes. This helps us understand the relative independence and interconnectedness of various themes.

*Cluster #0:* The theme revolves around public libraries and their services, including keywords such as public cultural services and digital cultural services. This cluster highlights research hotspots concerning the role and

impact of public libraries in cultural services.

*Cluster #1*: The theme focuses on organizational structure and big data, revealing attention to organizational structure and the application of information technology in library management.

*Cluster #3*: The keywords center on library culture, values, and librarian professionalism, reflecting a focus on internal cultural construction and librarian ethics within libraries.

*Cluster #4:* This cluster involves human resource management and library management systems, indicating the importance of human resource management and the need for institutionalized management in library operations.

*Cluster #6:* Keywords include learning organizations and knowledge management, showing research interest in libraries' roles in knowledge management and the development of learning organizations.

*Cluster #9*: This cluster focuses on tacit knowledge and library consortia, highlighting research on tacit knowledge management and library collaboration.

Additionally, the map includes smaller clusters, such as those involving the International Federation of Library Associations (IFLA), double first-class construction, and content analysis. Although these clusters are smaller in scale, they reflect specific research interests in certain areas.

Table 1. High-Frequency Keywords in the Field of Library Organizational Culture								
No.	Keywords	Count	Centrality	Year				
1	Library	165	0,4	2004				
2	Organizational Culture	136	0,27	2004				
3	University Library	99	0,36	2004				
4	Public Library	53	0,68	2004				
5	Knowledge Management	32	0,3	2004				
6	Library Management	32	0,53	2004				
7	Library Culture	28	0,27	2004				
8	Party Reading Group	20	0	2004				
9	Librarians	18	0,08	2005				
10	Student Party Members	18	0	2004				
11	Cultural Construction	16	0,01	2004				
12	Learning Organization	12	0,06	2005				
13	Human Resources	12	0,08	2004				
14	Campus Culture	11	0,08	2004				
15	Human Resource Management	10	0,04	2005				
16	Library Organizational Culture	10	0,43	2005				
17	Political Literacy	9	0	2004				
18	Library Consortium	9	0,08	2004				
19	Management	8	0,04	2005				
20	Innovation	7	0,02	2006				
21	Knowledge Transfer	7	0,04	2008				
22	Influencing Factors	7	0,04	2011				
23	Political Construction	7	0	2004				
Source: Compiled by this study								

Figure 2 showcases multiple clusters in different colors, with each cluster representing an independent thematic area, revealing the cluster distribution of current research themes. This helps us understand the relative independence and interconnectedness of various themes.

*Cluster #0:* The theme revolves around public libraries and their services, including keywords such as public cultural services and digital cultural services. This cluster highlights research hotspots concerning the role and impact of public libraries in cultural services.

*Cluster #1*: The theme focuses on organizational structure and big data, revealing attention to organizational structure and the application of information technology in library management.

*Cluster #3*: The keywords center on library culture, values, and librarian professionalism, reflecting a focus on internal cultural construction and librarian ethics within libraries.

*Cluster #4*: This cluster involves human resource management and library management systems, indicating the importance of human resource management and the need for institutionalized management in library

operations.

*Cluster #6:* Keywords include learning organizations and knowledge management, showing research interest in libraries' roles in knowledge management and the development of learning organizations.

*Cluster #9*: This cluster focuses on tacit knowledge and library consortia, highlighting research on tacit knowledge management and library collaboration.

Additionally, the map includes smaller clusters, such as those involving the International Federation of Library Associations (IFLA), double first-class construction, and content analysis. Although these clusters are smaller in scale, they reflect specific research interests in certain areas.



Figure 1. Keyword Co-occurrence Map in the Field of Library Organizational Culture Source: Created by this study

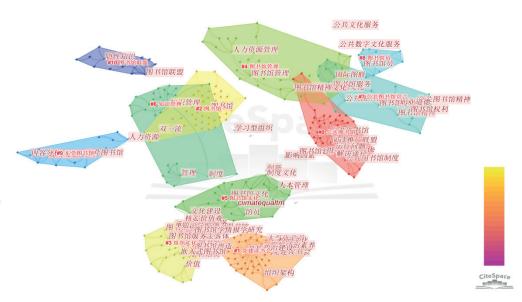


Figure 2. Keyword Cluster Map in the Field of Library Organizational Culture Source: Created by this study

#### Keyword Timezone View

The keyword timezone view is a powerful analytical tool that reveals the evolution and development trends of research hotspots. By observing the frequency and changes of keywords over different periods, researchers can better understand the development trajectory of various themes in the academic field.<sup>(16)</sup> This method not only helps researchers identify emerging trends in the discipline but also tracks the evolution of existing research themes, providing valuable references for future studies.

Figure 3, the keyword timezone map, displays the co-occurrence and temporal distribution of different

keywords in academic research from 2004 to 2023. The map uses colored lines to connect various keywords, forming different clusters, each representing a specific research theme or area. The different colored clusters reflect the trends and evolution of keywords over different time periods.

From the map, it can be seen that the temporal distribution of keywords in different clusters varies significantly. In the early period (2004-2010), research mainly focused on improving library infrastructure and service quality. For example, keywords such as "public cultural services" and "digital libraries" frequently appeared during this period, indicating that the research focus at that time was on enhancing the functions and influence of libraries through improved infrastructure and services.

As time progressed, in the mid-period (2010-2015), the research hotspots gradually shifted towards library management and organizational culture construction. Keywords such as "organizational structure," "cultural construction," and "human resource management" became more prominent during this period, showing increasing attention from researchers on internal management and the cultural atmosphere of libraries.

In the recent period (2016-2023), the research focus further expanded to knowledge management, professional development of librarians, and the construction of library consortia. Keywords such as "knowledge sharing," "librarian training," and "collaboration" frequently appeared during this stage, indicating that libraries were not only concerned with internal management and service quality but were also actively exploring new methods of knowledge management, enhancing the professional qualities of librarians, and expanding their influence and service scope through cooperation and alliances.

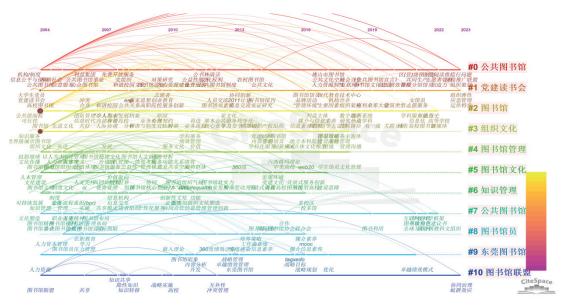


Figure 3. Keyword Cluster Timezone Evolution Map in the Field of Library Organizational Culture

#### Keyword Burst Detection

Keyword burst analysis helps identify important keywords that have surged in prominence during specific periods. These burst keywords typically represent emerging research directions and frontier issues.<sup>(17)</sup> By combining timezone maps and burst analysis, researchers can gain a more comprehensive understanding of the dynamic changes in the research field, uncover potential research opportunities, and thus drive innovation and progress in academic research.

Figure 4 displays the top 20 keywords with the strongest citation bursts detected by CiteSpace software from 2004 to 2023. These burst keywords represent a sharp increase in research interest during specific periods, reflecting emerging hotspots and important trends in academic research. Each keyword's burst strength, start year, end year, and burst period (indicated by a red bar) are marked.

The visualization shows the sudden rise in interest for these keywords over time, offering insights into the temporal dynamics of research trends. For instance, certain keywords may experience significant bursts during early periods, indicating foundational or rapidly growing interest areas. In contrast, recent bursts highlight contemporary or evolving topics that are gaining traction. This analysis aids researchers in identifying not only historical but also emerging trends, guiding them toward new and potentially impactful areas of study.

From 2004 to 2023, the top 20 keywords with the strongest citation bursts detected by CiteSpace software can be categorized according to their burst periods, summarizing the main focus and trends of research during different periods.

# **Top 20 Keywords with the Strongest Citation Bursts**

Keywords	Year St	rength Begin	End	2004 - 2023
图书馆管理	2004	3.67 <b>2004</b>	2008	
学习型组织	2004	2.31 <b>2005</b>	2008	
图书馆组织文化	2004	1.48 <b>2005</b>	2009	
创新	2004	1.44 <b>2006</b>	2009	
图书馆	2004			
知识管理	2004	5.47 <b>2007</b>	2012	
人本管理	2004	1.67 <b>2007</b>	2010	
知识转移	2004	2.89 <b>2008</b>	2011	_
隐性知识	2004			_
和谐校园文化	2004	1.23 <b>2008</b>	2011	_
价值	2004	1.29 <b>2011</b>	2015	
组织管理	2004	1.98 <b>2012</b>	2015	
核心竞争力	2004			
图书馆文化	2004	1.39 <b>2012</b>	2015	
高校图书馆	2004	6.09 <b>2014</b>	2017	
信息素养	2004	1.74 <b>2014</b>	2019	
公共数字文化服务	5 2004	1.75 <b>2016</b>	2023	
思想政治素养	2004	1.64 <b>2016</b>	2023	
公共图书馆	2004	4.63 <b>2018</b>	2023	
公共文化服务	2004	1.71 <b>2019</b>	2023	

Figure 4. Keyword Burst Detection Map in the Field of Library Organizational Culture

#### Early Stage (2004-2010)

During the early stage, research primarily focused on the basic management and organizational construction of libraries. Keywords such as "library management," "learning organization," "library organizational culture," "innovation," and "knowledge management" frequently appeared. This reflects the researchers' emphasis on enhancing library management efficiency and internal organizational culture. The research in this period aimed to improve the overall functionality and service level of libraries through better management and organizational structures.

#### Mid Stage (2010-2015)

In the mid stage, research hotspots gradually shifted towards internal management and cultural construction within libraries. Keywords like "knowledge transfer," "tacit knowledge," "harmonious campus culture," "value," and "organizational management" highlighted the researchers' focus on internal knowledge management and cultural atmosphere in libraries. This period's research indicated that libraries need optimization not only at the management level but also in terms of culture and values to enhance overall service quality and reader satisfaction.

#### Recent Stage (2016-2023)

In the recent stage, the research focus further expanded to digital transformation and public services. Keywords such as "information literacy," "public digital cultural services," "political literacy," "public library," and "public cultural services" demonstrated libraries' efforts to address the challenges of the information age and enhance public service capabilities. The research during this period reflected libraries' continuous exploration of digital service models, improvement of readers' information and political literacy, and expansion of public cultural services, while still focusing on enhancing their social influence through collaboration and alliances.

This temporal categorization of burst keywords provides a clear picture of how research priorities in the field of library organizational culture have evolved over time, offering valuable insights into past trends and future directions.

### DISCUSSION

# Organizational Culture Construction

The construction of organizational culture occupies a significant position in research on libraries. Research hotspots mainly focus on how to establish and promote an organizational culture that meets the developmental needs of libraries, emphasizing the core role of cultural values. Specifically, researchers have explored the importance of cultural construction in enhancing internal cohesion and service quality within libraries. Keywords such as "organizational culture," "values," "core values," and "cultural construction" frequently appear, indicating that researchers are concerned with improving the overall efficiency and employee satisfaction of libraries through strengthening organizational culture. Future research should continue to deepen the discussion on organizational culture construction, further study the impact of library organizational culture on employee

behavior and organizational performance, investigate best practices for organizational culture construction in different cultural contexts, and explore methods for cultural change and innovation.

# Knowledge Management and Tacit Knowledge

Knowledge management is a crucial theme in library organizational culture, particularly regarding effective knowledge sharing and transfer. Research shows that libraries face challenges in identifying and utilizing tacit knowledge in knowledge management. Keywords such as "knowledge management," "knowledge transfer," and "tacit knowledge" frequently appear among burst terms, reflecting researchers' high attention to this area. The research includes how to build effective knowledge management systems, promote the externalization of tacit knowledge, and improve libraries' innovation capacity and service levels through knowledge transfer. Future research should strengthen the study of knowledge management and tacit knowledge, develop new tools and methods for knowledge management to enhance the efficiency of knowledge sharing and transfer, and particularly focus on new techniques and strategies for the externalization and utilization of tacit knowledge to boost libraries.

### Learning Organizations

Building learning organizations is an important strategy to enhance the overall capabilities of libraries. Researchers have explored how to drive the development of libraries through organizational learning and knowledge sharing, creating an organizational environment with continuous learning and innovation capabilities. Keywords such as "learning organization," "organizational learning," and "knowledge sharing" show significant temporal distribution trends in the timezone maps, reflecting the research interest in this field. The research covers the theoretical framework of learning organizations, their practical application in libraries, and specific implementation strategies aimed at improving libraries' adaptability and competitiveness. Future research should continue to promote the construction of learning organizations, study how to effectively implement the theory and practice of learning organizations in libraries, explore successful cases of different types of libraries in building learning organizations, and enhance the learning and innovation capabilities of organizations.<sup>(18)</sup>

### Human Resource Management

Human resource management is a crucial aspect of organizational culture construction in libraries. Research focuses on how effective human resource management strategies can enhance librarians' professional skills and career development paths, including training and development, performance management, and more. Keywords such as "human resource management," "librarian training," and "career development" highlight the research interest in this area. The research includes developing and implementing effective training programs, creating support systems for librarian career development, and improving librarians' job motivation and efficiency through performance management.<sup>(19)</sup> Future research should further optimize human resource management, study the long-term impact of human resource management on librarians' career development, develop training and development plans for librarians to enhance their professional skills and job satisfaction, and improve the scientific and effective aspects of human resource management.<sup>(20)</sup>

# Library Management and Innovation

Management innovation holds a significant position in the organizational culture of libraries. Researchers focus on how management innovation and institutional construction can enhance library operational efficiency and service levels, exploring new management models and innovative strategies. Keywords such as "library management," "innovation," and "management systems" frequently appear in co-occurrence and cluster maps, reflecting the research interest in this field. The research includes the introduction of new management methods, optimization of management processes, and the application of innovative technologies and tools, aiming to drive library development and transformation through management innovation. Future research should continue to explore management innovation, explore management models that adapt to new technologies and environments, optimize management processes, and enhance library operational efficiency and service quality.

# Public Cultural Services

As one of the important functions of libraries, public cultural services receive widespread attention. Research includes how digital transformation can improve the efficiency and quality of public cultural services, expand the social service functions of libraries, and enhance their influence in the community. Keywords such as "public cultural services," "digital cultural services," and "social services" prominently appear in burst terms and timezone maps, reflecting the research interest in this area. The research involves the concepts and implementation strategies of public cultural services, the application of digital technology in cultural services, and the evaluation and improvement methods of public cultural services. Future research should strive to enhance the level of public cultural services. In the context of digital transformation, it should explore how to

better utilize digital technology to improve the quality and coverage of public cultural services, explore new models and methods for public cultural services, and enhance the influence and service capabilities of libraries in the community.

#### Limitations of the study

This study, based on the CNKI Chinese database, conducted a comprehensive analysis of keyword cooccurrence, keyword cluster analysis, keyword timezone maps, and keyword burst detection in the field of library organizational culture. It revealed the main research hotspots and their evolution in this field, focusing on areas such as organizational culture construction, knowledge management and tacit knowledge, learning organizations, human resource management, library management and innovation, and public cultural services. These findings provide important references and insights for further exploration of the role and impact of libraries in knowledge management and cultural construction.

However, there are some limitations to this study. First, although the keyword analysis identified the main research hotspots in library organizational culture, the deeper causes and specific applications of these hotspots need further investigation. Second, since the data source is primarily limited to CNKI, some important research might not be covered, limiting the comprehensiveness of the research results. Additionally, the analysis methods in this study mainly relied on bibliometrics and lacked in-depth analysis of specific cases and practical operations.

Therefore, future research should combine more empirical data and case studies to further validate and enrich the conclusions of this study. Integrating additional data sources and employing a variety of research methods could provide a more comprehensive understanding of the complexities of library organizational culture and its practical implications.

#### REFERENCES

1. Ocran TK, Afful-Arthur P. The role of digital scholarship in academic libraries, the case of university of cape coast: opportunities and challenges. LIBRARY HI TECH. 2022;40(6):1642-57.

2. Dresel R, Henkel M, Scheibe K, Zimmer F, Stock WG. A Nationwide Library System and Its Place in Knowledge Society and Smart Nation: The Case of Singapore. LIBRI-INTERNATIONAL JOURNAL OF LIBRARIES AND INFORMATION STUDIES. 2020;70(1):81-94.

3. Istvandity L, Baker S, Long PL. Creative futures for cultural heritage: a typology of creative practice in the GLAM sector - towards a creative heritage approach. MUSEUM MANAGEMENT AND CURATORSHIP. 2024.

4. Arghode V, Lathan A, Alagaraja M, Rajaram K, McLean GN. Empathic organizational culture and leadership: conceptualizing the framework. EUROPEAN JOURNAL OF TRAINING AND DEVELOPMENT. 2022;46(1-2):239-56.

5. Nutefall JE, Barry M, Gruber AM, Ivey O. Assessing Service-Learning Programs in Academic Libraries: A Rubric in Action. PORTAL-LIBRARIES AND THE ACADEMY. 2021;21(1):9-35.

6. Cong X, Guo Y, Wang X, Xu L. The Mission and Responsibility of Public Libraries in the Long-term Preservation of Digital Heritage: An Analysis Based on the Second Edition of UNESCO's "Guidelines for the Selection of Digital Heritage for Long-term Preservation". Library Journal. 2023(02):99-106.

7. Jing L, Zhao P, Zhao J. Analysis of Public Library Reading Promotion Strategies from the Perspective of Cultural Inheritance. New Century Library. 2022(12):41-6.

8. Li Y, Li J, Gong L. Reflections on Cultural Elements in the Discipline Construction of Library, Information, and Archives Science in the New Era. Library and Information Service. 2022;66(01):52-61.

9. Xia Q. Public Reading Services in Rural Areas Abroad: Practices and Insights. Library Tribune. 2015;35(12):134-8.

10. Wang Y, Duan Y, Xu H. The Mechanism of Organizational Culture in Public Libraries on Service Innovation. Library Tribune. 2022;42(03):78-86.

11. Tan D, Sun Y, Tong Z, Liu J. Summary of the 2nd (2014) "Global Vision: University Library Directors Forum". Library Journal. 2015;34(11):106-12.

12. Carayannis EG, Ferreira JJM, Fernandes C. A prospective retrospective: conceptual mapping of the intellectual structure and research trends of knowledge management over the last 25 years. JOURNAL OF KNOWLEDGE MANAGEMENT. 2021;25(8):1977-99.

13. Chen CM. CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature. Journal of the American Society for Information Science and Technology. 2006(3):57.

14. Chen C. CiteSpace: A Practical Guide for Mapping Scientific Literature: CiteSpace: A Practical Guide for Mapping Scientific Literature; 2016.

15. Ugur NG, Akbiyik A. Emerging Trends in IS Research: A Co-word Analysis (2007-16). CANADIAN JOURNAL OF INFORMATION AND LIBRARY SCIENCE-REVUE CANADIENNE DES SCIENCES DE L INFORMATION ET DE BIBLIOTHECONOMIE. 2018;42(3-4):228-48.

16. Hou JH, Yang XC, Chen CM. Emerging trends and new developments in information science: a document co-citation analysis (2009-2016). SCIENTOMETRICS. 2018;115(2):869-92.

17. Jun-Wan L, Lu-Cheng H, editors. Detecting and Visualizing Emerging Trends and Transient Patterns in Fuel Cell Scientific Literature. 2008 4th International Conference on Wireless Communications, Networking and Mobile Computing.

18. Obeso M, Hernández-Linares R, López-Fernández MC, Serrano-Bedia AM. Knowledge management processes and organizational performance: the mediating role of organizational learning. JOURNAL OF KNOWLEDGE MANAGEMENT. 2020;24(8):1859-80.

19. Gupta A, Liu Y, Lin TC, Zhong QC, Suzuki T. Listening to diverse voices: inclusive pedagogy and culturally responsive teaching for library interactions. REFERENCE SERVICES REVIEW. 2024;52(1):66-85.

20. Anasi SN. Perceived influence of work relationship, work load and physical work environment on job satisfaction of librarians in South-West, Nigeria. GLOBAL KNOWLEDGE MEMORY AND COMMUNICATION. 2020;69(6-7):377-98.

#### FINANCING

The authors did not receive financing for the development of this research.

#### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest

#### **AUTHORSHIP CONTRIBUTION**

Conceptualization: Haidong Sun. Data Curation: Haidong Sun. Formal Analysis: Haidong Sun. Research: Haidong Sun. Methodology: Haidong Sun. Project Management: Xuan Zhu. Resources: Xuan Zhu. Software: Xuan Zhu. Supervision: Haidong Sun. Validation: Xuan Zhu. Display: Haidong Sun. Drafting - Original Draft: Haidong Sun.