

Survey and Analysis of the Current Status of Subject Service Team Building in Chinese University Libraries (Postprint)

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Abstract

[Purpose/Significance] This study investigates and analyzes the current status and challenges in the construction of subject service teams in Chinese university libraries, and proposes targeted recommendations from a team perspective, which holds practical significance for enhancing the innovative service level of libraries.

[Method/Process] Through interviews with four university libraries in Shanghai and a questionnaire survey of 52 university libraries nationwide, the current construction status of subject service teams in Chinese university libraries is analyzed from six aspects, including team composition, full-time subject librarian status, and team leadership.

[Results/Conclusion] Currently, the personnel composition of subject service teams is relatively reasonable, team leadership is becoming younger, and decision support, research data support, and subject trend analysis are gradually becoming the priorities of subject service work. However, subject service teams face issues and challenges, including divergent perceptions among university libraries regarding the importance of subject services, challenges to subject librarians' competencies and knowledge reserves, and insufficient team construction.

Full Text

Preamble

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Investigation and Analysis on the Construction of Subject Service Teams in Chinese University Libraries

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Abstract

[Purpose/Significance] This study investigates and analyzes the current status and challenges faced by subject service team construction in Chinese university libraries, offering targeted recommendations from a team perspective to enhance innovative service levels in libraries. **[Method/Process]** Through interviews with four university libraries in Shanghai and a questionnaire survey of 52 university libraries nationwide, this paper examines the construction status of subject service teams across six dimensions, including team composition, full-time subject librarians, and team leadership. **[Result/Conclusion]** The findings indicate that subject service teams currently have reasonably structured personnel and increasingly younger leadership, with decision support, research data support, and subject situation analysis gradually becoming focal points of subject services. However, significant challenges remain, including divergent perceptions among university libraries regarding the importance of subject services, capacity and knowledge gaps among subject librarians, and inadequate team construction efforts.

Keywords: subject service team; construction status; investigation and analysis

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1. Introduction

Subject services originated in foreign research university libraries as an information service model centered on subject librarians. Since the 20th century, foreign university libraries have gradually implemented the subject librarian system. Chinese libraries started subject services later than their foreign counterparts. The first paper specifically introducing subject librarians was Chen Jing's 1987 article "Establishing a Professional Team of 'Subject Librarians,'" while Tsinghua University Library pioneered subject librarian practices in 1998. Subsequently, renowned institutions such as Peking University, Shanghai Jiao Tong University, and Xi'an Jiao Tong University launched subject services with subject librarians as the main providers.

After approximately two decades of exploration, subject services have become a priority and value demonstration of university library work. The evolution has progressed from individual subject librarians working in isolation to collaborative subject service teams and groups, from simple resource promotion to comprehensive subject service platform construction, and from departmental resource training to embedded support throughout users' teaching and research processes. Chinese university libraries have undergone a progressive development trajectory of introduction, digestion, absorption, and re-innovation in their subject service practices.

Subject librarians constitute the key to subject services, and complementary subject service teams are gradually becoming the mainstream personnel structure.

Consequently, Chinese scholars have conducted extensive research on subject service teams, focusing on several themes: (1) **Concept of subject service teams**: Lian Lijun defines subject service teams as professional librarian groups that integrate the entire library's resources through team-based construction to provide comprehensive information support for discipline development. (2) **Organizational structure**: Yan Xiaofen proposes a large-team construction model comprising a subject service guidance group, subordinate subject service teams, and a support echelon. (3) **Service models and content**: Liu Yuanjun proposes positioning for subject information service teams and classifies them into three service models oriented toward institutes, research groups, and major projects based on different service targets and types. (4) **Management mechanisms**: Yan Xiaofen compares Chinese and American subject service team management systems, while Huang Fukun proposes self-management theory for subject service teams through progressive authorization, librarian self-management, and team culture construction to promote healthy team development. (5) **Performance evaluation**: Tang Shuxiang's survey of 25 "985" university libraries found none had established specific subject service performance evaluation indicator systems, though most had multiple feedback channels for user opinions, and she proposed constructing a multi-dimensional evaluation indicator system and preliminary evaluation model. (6) **Case studies**: Zhu Xiaojing analyzes the advantages and challenges of team-based subject service models based on practices at Renmin University of China Library. (7) **Performance influencing factors**: Zhang Xinhong examines factors affecting subject service team effectiveness from the perspective of inclusive leadership, while Nie Fengying explores this based on shared mental models.

Existing research provides important theoretical and practical references for establishing subject service teams. The "Double First-Class" university construction initiative places higher demands on library subject services. What is the current status of subject service team construction in Chinese university libraries? What challenges do they face? Does team construction meet the requirements of the "Double First-Class" initiative? Addressing these questions through investigation and analysis of current conditions and offering targeted recommendations from a team perspective holds practical significance for improving library innovative service levels.

2. Investigation of Subject Service Teams in Selected Chinese University Libraries

2.1 Research Process and Methods

2.1.1 Research Process This study consisted of two phases. **Phase one (May 2018)** involved visits to Shanghai Jiao Tong University, Fudan University, Tongji University, and East China Normal University libraries for discussions with department directors responsible for subject services to understand team composition, work content, performance evaluation, and existing

challenges, providing a foundation for the second-phase questionnaire survey. **Phase two (July–December 2018)** involved questionnaire design (July–September), distribution and collection (October–November), and data analysis (December). The questionnaire comprised 32 questions across six sections: (1) basic team construction information (whether teams were established, reasons for not establishing teams, team composition); (2) full-time subject librarian demographics (numbers, proportion of total library staff, educational background, age, knowledge background); (3) team leadership (age, education, years of subject service experience, self-assessed leadership style); (4) current service implementation (main services, priorities, target audiences); (5) team construction (regulations, librarian training, team goals, branding); and (6) performance evaluation (evaluation targets, subjects, methods, and feedback mechanisms).

2.1.2 Survey Methods Based on the Ministry of Education, Ministry of Finance, and National Development and Reform Commission’s September 2017 “Notice on Publishing the List of World-Class Universities and First-Class Discipline Construction Universities and Disciplines,” we randomly selected first-class universities, first-class discipline construction universities, and non-“Double First-Class” universities by region. Questionnaires were distributed via email, WeChat, and QQ to directors of subject service departments, information consultation departments, or subject service team leaders. A total of 75 questionnaires were distributed, with 52 returned (69.33% response rate). Participating first-class university libraries included Tsinghua University, Zhejiang University, University of Science and Technology of China, Wuhan University, Xiamen University, Tongji University, Nanjing University, Xi’an Jiao Tong University, Northwestern Polytechnical University, Beihang University, and Yunnan University. First-class discipline construction university libraries included Southwest University, Northwest University, Northeast Normal University, Beijing University of Posts and Telecommunications, South China Normal University, Hohai University, Chengdu University of Technology, University of International Business and Economics, Shanghai University of Finance and Economics, and Nanjing University of Science and Technology. Non-“Double First-Class” university libraries included Liaoning Normal University, Sichuan Normal University, Xi’an University of Architecture and Technology, Guangdong University of Foreign Studies, and South China Agricultural University.

2.2 Current Status of Subject Service Team Construction in Four Shanghai University Libraries

The subject services of Shanghai Jiao Tong University, Fudan University, Tongji University, and East China Normal University libraries represent relatively high standards in Chinese university libraries. Analyzing their work content, personnel composition, and service challenges through interviews provides important references for other libraries.

表 1 Current Status of Subject Service Team Construction in Four Shanghai University Libraries

Library	Department Setup	Full-time Subject Librarians	Service Characteristics	Team Management	Existing Challenges
Shanghai Jiao Tong University Library	Learning and Research Support Department, 12 subject service teams	12 full-time subject librarians, master's degree or above, balanced backgrounds in LIS and other disciplines	Embedded curriculum, institutional repository, intelligence analysis, research support, decision assistance, talent evaluation, first-class discipline tracking platform	Self-assessment-based evaluation with quantitative assessment; no job rotation for subject service positions	Gap between user demands and librarian capabilities
Fudan University Library	Reference Department, Intelligence Research Department	6 full-time subject librarians, emphasizing LIS background; 5 intelligence researchers	Department liaison, embedded curriculum, research support, discipline resource selection, collection evaluation, data monitoring, achievement repository platform	Team collaboration with biweekly meetings for work and communication, expert training, international library exchanges	Insufficient staffing

Library	Department Setup	Full-time Subject Librarians	Service Characteristics	Team Management	Existing Challenges
Tongji University Library	Discipline and Intellectual Property Service Department, Intelligence Analysis and Research Department	9 full-time subject librarians, 5 intelligence analysts, master's degree or above, backgrounds in chemistry, physics, etc.	Project embedding, discipline profiling, SCI data analysis, discipline resource needs, patent information services, research support	Emphasizes teamwork, library funding and time support for training, librarian self-assessment, quantitative and qualitative evaluation	High library expectations vs. reality gap
East China Normal University Library	Research Support Department, 12 subject service teams	16 full-time subject librarians, master's degree or above, backgrounds in science and other disciplines	Department liaison, information push, discipline resource construction, intelligence services, discipline competitiveness analysis, faculty performance evaluation	Innovation team led by library director, no specific performance evaluation	Poor cross-departmental coordination, insufficient in-depth departmental services

As shown in Table 1, the four Shanghai university libraries each have distinctive features in subject service team construction. In terms of service content, Shanghai Jiao Tong University Library prepares talent evaluation reports for decision-makers based on H-index, journal impact, and publication metrics, and has established a first-class discipline tracking platform. Tongji University Library has created an intellectual property team with three members holding patent agent qualifications, establishing a unified patent platform providing special-

ized services in patent analysis and achievement promotion. Fudan University Library has built proprietary data monitoring systems and achievement repository platforms to make subject reports more efficient and accurate. In terms of departmental setup, all four libraries emphasize data management and intelligence analysis beyond traditional subject services, extending service targets to administrative decision-making departments. Challenges include capability gaps between librarians and user needs, as well as weak team construction manifested in unclear goals and team culture, insufficient library support, and persistent difficulties in performance evaluation.

2.3 Survey Results of Subject Service Team Construction in Selected Chinese University Libraries

2.3.1 Basic Team Construction Analysis Among the 52 surveyed libraries, five had not implemented subject services (three first-class discipline construction universities and two non-“Double First-Class” universities). Regarding team construction, one-quarter had not established subject service teams, citing incomplete staffing and lack of team management as primary reasons, with others including leadership indifference, insufficient guidance, and perceptions that subject services were outdated. In team composition, 52% of teams consisted solely of full-time subject librarians, 36% comprised full-time librarians plus internal part-time librarians (acquisition librarians, reference librarians, etc.), and 12% included full-time librarians, part-time librarians, and departmental library faculty. No surveyed libraries adopted the full-time librarian plus departmental library faculty model alone.

The survey revealed that some university libraries hold misconceptions about subject services and lack overall strategic planning. Subject services are crucial for deepening library service content and realizing core values, yet some libraries lack this understanding, following industry trends without sustained investment in human and hardware resources, causing exploratory subject services to fail prematurely. Libraries must develop medium- and long-term development plans aligned with their actual conditions and institutional goals rather than chasing social trends. In team composition, full-time subject librarians have become the main component, addressing early issues of overlapping responsibilities, procedural complications, and superficial service associated with part-time librarians.

2.3.2 Full-Time Subject Librarian Team Demographics Tables 2 and 3 present the composition of full-time subject librarian teams. On average, subject service teams have 10.4 full-time librarians. First-class universities average 12.5 librarians, higher than first-class discipline construction universities (9.3) and non-“Double First-Class” institutions (8), aligning with service demands and human resources across different institutional tiers. Wuhan University had the most full-time subject librarians (32). Regarding proportion of total library staff, 66.7% of first-class university libraries fall in the 5%-10.99% range, while 36.4% of first-class discipline construction libraries are below 5%, and non-

“Double First-Class” libraries are evenly distributed. Overall, 43.5% of libraries have ratios between 5%-10.99%.

In gender distribution, female subject librarians outnumber males 5:1, a higher ratio than the overall library gender distribution, making female librarians the team majority. In educational background, master’s degree holders (61.3%) constitute the main group, though many libraries have doctoral librarians, such as University of Science and Technology of China and Northeast Normal University with six each. Age distribution shows 31-40 year-olds as the primary group (46.4%), followed by 41-50 year-olds. In disciplinary background, first-class university libraries have more science and engineering backgrounds (47.8%) than LIS or other humanities, while first-class discipline construction and non-“Double First-Class” libraries show minimal differences. In professional rank, librarians and below (65.7%) form the majority, though associate research librarians represent a significant proportion. Since subject librarians require research capabilities to support teaching and research, the current rank structure needs improvement. In subject service experience, the 4-6 year range slightly exceeds the 7+ year range, with combined 4+ year experience accounting for 70% of the total, indicating substantial service foundations.

2.3.3 Subject Service Team Leadership Leaders are direct managers of full-time subject librarian teams, such as subject service department directors or team leaders, who set medium- and long-term goals, coordinate internal and external relationships, and influence team members through personal charisma. This survey examined leader demographics, library tenure, and self-assessed leadership styles.

表 4 Demographics of Subject Service Team Leaders in Selected Chinese University Libraries

Leadership analysis shows 41-50 year-olds as the dominant group (58.3%), with few over 51 (none in first-class discipline construction or non-“Double First-Class” libraries). In education, 75% hold master’s degrees, with 30% of first-class university leaders holding doctorates. Female leaders outnumber males 3:1, though this ratio is lower than among general subject librarians. In library tenure, 50% of leaders have worked 11-20 years, with approximately 20% each in under-10 and over-21 year categories. In subject service experience, 45.8% have 6-10 years, indicating extensive experience. In self-assessed leadership style, participative leadership (35.7%) is most common, but closely followed by supportive (28.6%) and directive (23.8%) styles, with achievement-oriented leadership least common (11.9%). Achievement-oriented leaders establish clear, challenging goals emphasizing high-quality performance, which is particularly suitable for the innovative and challenging nature of subject librarian work.

2.3.4 Subject Service Implementation Table 5 presents current subject services, priorities, and target audiences. Regarding service content (nine items total), top services vary by institutional tier: first-class universities prioritize

subject intelligence analysis (88.9%), training and instruction (77.8%), and decision support (77.8%); first-class discipline construction universities focus on training and instruction (91.7%), subject resource promotion (83.3%), and teaching/research literature resource construction (83.3%); non-“Double First-Class” institutions emphasize literature retrieval and delivery (100%), training and instruction (92.8%), and subject resource promotion (91.5%). Service priorities also differ: first-class universities emphasize high-level intelligence services (66.7%), first-class discipline construction universities focus on teaching and research support (50%), and non-“Double First-Class” institutions concentrate on basic subject services (65%). Target audiences are relatively consistent across tiers, prioritizing key discipline departments, administrative decision-making departments, key laboratories, and renowned professors. The findings demonstrate that subject services should align with institutional research and teaching needs while deepening service levels from basic resource promotion and retrieval training toward high-value intelligence services such as discipline evaluation, situation analysis, and decision support.

2.3.5 Subject Service Team Construction Effective teams require not only excellent leaders but also shared vision, clear goals, institutionalized systems, and appropriate incentive mechanisms. This survey examined regulations, librarian training, and team-building activities.

表 6 Subject Service Team Construction in Selected Chinese University Libraries

The data shows 45.8% of libraries have established subject service management and librarian service regulations, but only 25% have librarian evaluation systems, while 25% lack any relevant regulations. Wuhan University Library, Guangdong University of Foreign Studies Library, and Sichuan Normal University Library have comprehensive regulatory systems. For training, conference participation, specialized training, and research visits are primary methods, with time and funding support being the main forms of library support. However, nearly one-fifth of libraries provide no special support for subject service teams. First-class university libraries significantly exceed others in support intensity and training diversity.

Regarding dedicated team-building activities, responses of “yes,” “no,” and “uncertain” were roughly equal (one-third each), though 55.6% of first-class university libraries conduct such activities. In terms of clear development goals, 56.5% of teams have established objectives, while 13.0% and 30.4% answered “no” and “uncertain,” respectively. Notably, 90% of first-class university subject service teams have clear goals. Regarding whether subject services are library brand projects, nearly half of surveyed libraries affirmed this, with first-class university libraries reaching 77.8%.

2.3.6 Performance Evaluation of Subject Service Teams The questionnaire examined evaluation targets, subjects, methods, and feedback mechanisms.

表 7 Performance Evaluation of Subject Service Teams in Selected Chinese University Libraries

Evaluation primarily targets individual librarians (52.2%), with only 26.1% evaluating the team as a whole or service outcomes, and 30.4% lacking specific evaluation indicators. Evaluation subjects are mainly self-assessment by librarians and assessment by department directors/team leaders, with only 21.1% incorporating user evaluations. Regarding feedback, 30.0% of libraries do not communicate evaluation results to librarians or teams, 35.0% use results as reference for professional title promotion, and 25.0% link results to salary performance. In evaluation methods, 52.9% use combined qualitative and quantitative assessment, while 41.2% use qualitative evaluation alone.

3. Survey Conclusions

Comprehensive analysis indicates that subject service teams currently have reasonable age, education, and disciplinary background composition, with younger leadership predominantly adopting participative leadership styles. Service content aligns with “Double First-Class” construction requirements, playing important roles in discipline tracking, talent evaluation, research data support, patent information services, and administrative decision support, gradually becoming library signature services with strong reputations. However, persistent problems include: (1) divergent perceptions among university libraries regarding the importance of subject services, leading to inconsistent implementation and commitment; (2) increasing challenges to subject librarians’ capabilities and knowledge reserves under new technologies and demands, with persistent gaps between user needs and service quality; (3) concerning team construction, evidenced by inadequate management systems, limited team-building activities, and unclear goals; and (4) weak performance evaluation lacking team-level and service outcome assessment, with minimal effective feedback, failing to promote development through evaluation.

4. Recommendations for Subject Service Team Construction

The “Double First-Class” initiative emphasizes coordinated, connotative development of universities and disciplines. University library subject services should leverage their strengths in information retrieval, intelligence analysis, and data management to support institutional “Double First-Class” construction. To meet these demands, subject service teams should focus on discipline dynamic evaluation, decision support, research data support, and teaching assistance, prioritizing key disciplines, major research teams, and proactive collaboration with administrative decision-makers. Based on current team construction status, we recommend strengthening subject service team effectiveness through team cultivation, control, collaboration, evaluation, and support.

4.1 Team Cultivation

Team cultivation encompasses two levels: (1) individual librarian capability development through skill enhancement aligned with information technology changes, including expert lectures, specialized training, and continuing education to accelerate knowledge updating and maintain technological sensitivity, while encouraging research participation to improve scientific research capabilities and dialogue with researchers; and (2) team-level cultivation focusing on communication, collaboration, and knowledge-sharing capabilities through beneficial team-building activities and reflective mechanisms to promote efficient team operation.

4.2 Team Control

First, subject service teams should establish shared vision, strategic planning, and medium- and short-term objectives, identifying explicit and implicit user information needs to develop reasonable work plans based on staffing. Second,健全 subject service regulations, including codes of conduct such as “Subject Librarian Position Responsibilities,” “Subject Service Work Guidelines,” and “Subject Service Logs.” Finally, strengthen process control by monitoring individual goal completion, proactive departmental outreach, and regular contact with key service targets through management by objectives.

4.3 Team Collaboration

Under the “Double First-Class” context, decision support and discipline evaluation have become priorities, extending service targets to administrative departments and requiring coordination with multiple stakeholders. Beyond communication skills, teams should utilize modern technologies to build collaborative innovation platforms for multi-directional communication and diverse collaboration, eliminating barriers and achieving deep cooperation to enhance the influence of service products such as “Discipline Competitiveness Reports” and “Talent Evaluation Reports.”

4.4 Team Evaluation

The survey identified team performance evaluation as a weak link, attributable to the lack of scientific yet operational evaluation indicators or superficial implementation failing to achieve development through evaluation. Theoretically, scholars have proposed evaluation indicators from input (academic background, training, research capability) and output (user volume, experience, evaluation, information acquisition) perspectives, or from five dimensions including team organization, library, team members, users, and service process. Traditional performance evaluation focuses on individual-job-task matching, whereas team evaluation should emphasize group and organizational levels. Beyond user satisfaction and service volume, evaluation should identify performance-influencing factors with particular attention to team process factors.

4.5 Team Support

Human resources, funding, and conditional support are fundamental to team operation. As an important window for enhancing library value, subject service teams require strengthened institutional support. Human investment is critical—beyond recruiting high-level talent, libraries should employ incentive mechanisms to maximize existing librarians' initiative, particularly by providing flexibility in scheduling to enhance creativity.

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

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