# Research on the Current Status and Development Strategies of University Intellectual Property Information Services in the WeChat Context: Postprint

**Authors:** Song Yumei, Yan Zhe, Zhu Lin, Luo Jun

**Date:** 2023-04-01T16:02:45+00:00

## Abstract

[Purpose/Significance] To gain a practical understanding of the current status of intellectual property information services in universities, this study takes WeChat services as the entry point to analyze and summarize the practices of university intellectual property information services, with the aim of providing insights for the innovation of intellectual property information services in university libraries. [Method/Process] A survey was conducted of the official subscription accounts of 86 university libraries that have independently established intellectual property information service centers, statistically analyzing the situation of intellectual property information service-related articles from five dimensions: publication time, authorship, service columns, readership volume, and specific content. [Results/Conclusion] University intellectual property information services are in a period of vigorous development and growth, with planning and management systems becoming increasingly perfected, initial success achieved in talent team construction, and service content being expanded and deepened. However, only by riding the fast train of the establishment and development of "University National Intellectual Property Information Service Centers," starting with strengthening top-level design and alliance construction, optimizing service models and service content, and promoting the establishment of an evaluation and assessment system, can rational planning, layout, and effective implementation be conducted to ensure the sustainable development of university intellectual property information services.

# Full Text

## Preamble

### Research on the Current Status and Development Strategies of Intellectual Property Information Services in Universities from the Perspective of WeChat Services

*Song Yumei, Yan Zhe, Zhu Lin, Luo Jun*

Nanjing University Library, Nanjing 210023

**Abstract:** *[Purpose/Significance]* To gain a practical understanding of the current state of intellectual property (IP) information services in universities, this study examines university IP information service practices through the lens of WeChat services, aiming to provide insights for service innovation in university libraries. *[Method/Process]* We investigated the official WeChat subscription accounts of 86 university libraries that have independently established IP information service centers, conducting statistical analysis of IP information service-related articles. The analysis examined five dimensions: publication timing, authorship, service columns, readership metrics, and specific content. *[Result/Conclusion]* University IP information services are in a period of vigorous development, with increasingly refined planning and management systems, initial success in talent team building, and expanded and deepened service content. However, to ensure sustainable development, these services must capitalize on the momentum of establishing and developing "National IP Information Service Centers for Universities" by strengthening top-level design and alliance building, optimizing service models and content, and establishing evaluation and assessment systems through rational planning and effective implementation.

**Keywords:** university library; intellectual property information service; WeChat service

**Classification Number:** G255
**DOI:** 10.13266/j.issn.0252-3116.2021.03.007

Intellectual property information services represent a new type of intelligence service that university libraries have actively expanded in response to the national IP strategy and the demands of innovation, entrepreneurship, and technology transfer. Particularly since the issuance of the *Implementation Measures for the Construction of University Intellectual Property Information Service Centers* (hereinafter referred to as the "Implementation Measures") in December 2017 [1], university libraries with existing IP information service foundations and sci-tech novelty search qualifications have seized development opportunities and aligned with policy directions to establish IP information service centers. Over the past two years, these libraries have focused on implementing the specific provisions of the "Implementation Measures."

## 2 Research Overview

With the rise and development of IP information services in university libraries, theoretical and practical research in this field has continuously innovated and expanded. Early studies focused on the integration and navigation of patent information resources [2], then progressed to research on service models [3], service systems [4], and service platform construction [5] for patent information services in university libraries. More recent work has examined capacity building for IP information services [6-7] and the construction of information literacy training systems [8], covering increasingly detailed aspects of university IP information services. Existing research also includes investigations and analyses of the current state of these services: Shen Jinhua et al. (2016) surveyed 718 university library websites in China, while other researchers have examined service conditions through literature reviews and website browsing. However, based on our investigation, there are often discrepancies between the IP information service content displayed on university library websites and actual service practices—some websites overstate their capabilities, while others lag far behind actual services. Therefore, it is necessary to introduce more objective third-party service practice data as a reference and supplement for research on this topic.

Since 2013, library official WeChat subscription accounts have served as promotional windows for library resources, information, and technology services. Due to their convenient resource access, easy searchability, and interactive features, they have become widely popular among users and have evolved into a primary service platform with overall planning and purposeful development [14]. During the COVID-19 pandemic, when physical libraries had to temporarily close, WeChat services played a crucial role. Existing scholarship has begun to examine specific content on WeChat, such as studies on information literacy courses [15], reading promotion [16], and reference consultation [17]. Regarding IP information services on WeChat, only Xu Chun [18] and Xu Sixian [19] have theoretically proposed collaborative IP information service WeChat public accounts and self-media-based patent information service models in university libraries. In summary, this study attempts to analyze the specific practices of university library IP information services from the perspective of WeChat service practice, explore the feasibility of this service model, and understand new trends and directions in this field based on WeChat data. The goal is to identify practical problems in IP information service implementation and propose corresponding countermeasures to support the innovative development of university IP information services.

## 3 Research Objects, Methods, and Basic Overview

### 3.1 Research Objects

Among the 86 university libraries surveyed, 57 (66%) had published IP service-related articles on their official subscription accounts (see Table 1). Of these 57 libraries, 49 (86%) host Ministry of Education Sci-Tech Novelty Search Sta-

tions; 23 are first-class universities, and 22 are first-class discipline universities, totaling 44 (77%). The institutions include 29 comprehensive universities, 22 science and engineering universities, 3 agricultural and forestry universities, and 2 each of medical and normal universities—primarily comprehensive and science/engineering institutions, accounting for 89% of the total.

The 57 libraries published a total of 437 IP information service-related articles. Zhejiang University Library had the highest output (25 articles), followed by Ningbo University Library (22 articles), with South China Agricultural University Library (21 articles), Northeast Normal University Library (21 articles), and Sun Yat-sen University Library (20 articles) close behind. Geographically, libraries in economically developed regions such as Jiangsu (8 institutions), Guangdong (7), Beijing (6), and Shanghai (5) demonstrated relatively mature IP-related service marketing and promotion on their official subscription accounts. Among the first batch of 23 National IP Information Service Centers for Universities, only Harbin Institute of Technology and Xiangtan University libraries had no IP-related articles on their subscription accounts. Nearly half of the libraries in the second batch also lacked such content. Notably, since establishing its IP Information Service Center in June 2019, Shenzhen Polytechnic has actively promoted its services through the library's official subscription account, ranking among the top in article output. As the first IP Information Service Center established within a vocational college library, its performance is significant for both the application and selection of National IP Information Service Centers for Universities and the transformation of vocational college libraries.

### 3.2 Research Methods

We followed the official subscription accounts of 86 university libraries, browsing historical articles to classify, statistically analyze, and index IP information service-related content. The investigation period for articles in official subscription accounts primarily began on March 15, 2019, when the first batch of National IP Information Service Centers for Universities was announced [21], and ended on April 30, 2020. University library websites and related research papers on IP information services were used as supplementary information sources for verification. The specific survey period was from May 1 to June 15, 2020.

### 3.3 Basic Overview

The basic conditions and article publication statistics for the 57 university libraries are shown in Table 1 .

From the temporal trend of IP-related articles in subscription accounts, there was a noticeable increase in April 2019 following the approval of the first batch of National IP Information Service Centers in March 2019. In 2020, despite the impact of COVID-19 on physical library services, new media became the primary platform for IP information services, with IP-related articles increasing

rather than decreasing. April 2020 saw 115 published articles, nearly double the number from the same period in 2019. Given the ongoing pandemic, online IP-related services will undoubtedly become one of the main service channels for library IP information services, as shown in Figure 1 [Figure 1: see original paper].

## 4 Intellectual Property Information Services in University Library WeChat Accounts

### 4.1 Article Publication Timing

IP services are primarily concentrated around "World Book and Copyright Day" (April 23) and "World Intellectual Property Day" (April 26). April is the peak period for university library IP information services, with many universities referring to it as "Patent Month" or "IP Month" and organizing series of activities around the World IP Day theme.

### 4.2 Article Authorship

Whether articles have clear editor attribution and detailed staff information reflects, to some extent, whether the library's IP information service has sound management systems and dedicated service teams. Through reading and indexing 437 articles, we found that 14 libraries (approximately 24%) had clear authorship, with only 9 libraries providing explicit editorial attribution for every article (see Table 2 ). Among the 14 libraries, Northeast Normal University Library, Huazhong University of Science and Technology Library, and Qingdao University Library clearly indicated that IP information service center staff belong to the Reference Department, Sci-Tech Novelty Search Station, and IP Information Service Department, respectively. Peking University Library, South China Agricultural University Library, Shanghai Jiao Tong University Library, and Hunan University Library displayed clear and detailed IP information service team information in their articles.

### 4.3 Article Column Organization

Regarding fixed columns (see Table 2 ), only 10 libraries (19%) had dedicated columns for their articles. Only Peking University Library categorized all IP-related articles under the "Intellectual Property" column. The other nine libraries only partially used fixed columns—for example, only 6 of South China Agricultural University Library's 21 articles were explicitly labeled under the "Intellectual Property Popular Science Series" column. Northeast Normal University Library had 7 of 14 articles under the "Demystifying IP" and "IP One-Hour Lecture Hall" columns, while South China University of Technology Library categorized only half of its articles under the "Knowledge Expansion Classroom" column. This shows that very few libraries have planned service columns in advance.

### 4.4 Article Readership Metrics

Readership is a crucial indicator of article impact, directly reflecting audience attention to content. Among 437 articles, 29 had over 1,000 views, indicating high interest in library IP information services among university faculty and students (see Table 3 ). High-readership articles can be categorized as: 1) Good news announcements (4 articles); 2) Lectures and training (11 articles); 3) Competitions (7 articles); 4) Promotion and publicity (4 articles); 5) University patent achievement statistics (2 articles); and 6) COVID-19-related patent information resources (1 article).

Dalian University of Technology, Chongqing University, Hebei University of Technology, and Sun Yat-sen University Library all publicized their approval as first-batch National IP Information Service Centers, expanding their influence. The predominance of lectures and training shows that faculty and students are most concerned about effectively utilizing IP information resources and related retrieval skills. Zhejiang University's "Ten Minutes Daily: Learn About Patents at Home" and Shanghai Jiao Tong University's "Patent School" received strong responses. Influential IP competitions also attracted attention—the 3rd China Patent Retrieval Skills Competition, organized by Tsinghua University in collaboration with Jiangsu Provincial IP Information Service Center and Beijing IP Administration, attracted over 700 participants, with nearly 27,000 real-time viewers for the live-streamed final. For business promotion, article titles, graphics, and writing style affected readership. The highest-readership article, pushed by Sichuan University Library and titled "Let 'Grandpa Qiao' No Longer Shed Tears On World IP Day, the Library is Taking Action!", used the Jordan trademark case as an entry point, employed relevant emojis as cover images, and adopted a lively, trendy writing style that resonated with faculty and students. Statistics and analyses of university patent portfolios also attracted interest, particularly at comprehensive universities. For example, Jilin University's publication of its patent applications and grants over the past decade and Nanjing University's release of its 2019 Patent Information Annual Report both generated interest.

### 4.5 Article Content Analysis

Content analysis of the 437 articles revealed seven themes: lectures/training, promotion/publicity (specific to services offered by IP information service centers), competitions, resource promotion, IP popular science, university patent achievement analysis, and typical case demonstrations (see Figure 2 [Figure 2: see original paper]).

Lectures and training accounted for the highest proportion (approximately 38%), followed by promotion and publicity (nearly 25%), consistent with the themes of high-readership articles. Competitions comprised 14%, popular science 10%, and resource promotion 9%. Interestingly, competitions and popular science, as important methods of library resource promotion, proved

more popular than direct resource promotion. In-depth services demonstrating practical capabilities, such as university patent achievement analysis and typical case demonstrations, accounted for only 3% and 1%, respectively. Only seven libraries, including Peking University, Tsinghua University, and Nanjing University, published statistical analyses of their patent portfolios. For typical case demonstrations, only Peking University Library, Fudan University Library, and South China Agricultural University Library shared patent analysis results related to COVID-19 technologies (see Figure 3 [Figure 3: see original paper]).

**4.5.1 IP Information Service Promotion and Publicity** Before 2017, very few libraries offered IP information services on their official subscription accounts, with content mainly limited to lectures and resources. Most libraries began recognizing the potential of WeChat for IP information service promotion only after the creation of National IP Information Service Centers for Universities began in late 2018. Currently, 40 of the 57 university IP information service centers have conducted varying degrees of business promotion through their subscription accounts, publicizing services, themed activities, and training (see Figure 3). Notable examples include Hunan University Library's series: "Call for Proposals: Hunan University Key Domain Patent Navigation Analysis Projects," "Notice on Hunan University Patent Early Warning Services," and "Attention All Hunan University Researchers, Look Here! The IP Information Service Center is Doing Something Big!" These three articles closely aligned with the key tasks in the "Several Opinions on Improving Patent Quality and Promoting Transformation and Utilization in Higher Education Institutions" (Jiao Ke Ji [2020] No. 1) issued by three ministries at the beginning of the year [22].

**4.5.2 IP Lectures and Training** Information resource retrieval and utilization training has always been a conventional service offered by university libraries to readers. During this transitional period of service expansion and upgrading, libraries leverage their service strengths to "conduct IP information literacy education and popularization," which has become a primary focus of IP information services. The statistical analysis shows that, in addition to traditionally strong programs at Peking University Library, Shanghai Jiao Tong University Library, and Nanjing University of Aeronautics and Astronautics Library, many universities have launched IP lecture series. Northeast Normal University Library offers "IP One-Hour Classes," East China University of Science and Technology hosts "IP Schools" on two campuses, and Wuhan University of Technology Library and Jilin University Library have integrated IP content into their "South Lake Lectures" and "Jilin University First Hospital Lectures" series, respectively. Some libraries have innovated further to adapt to users' fragmented reading habits by launching IP micro-classes. Zhejiang University Library began offering "Patent Micro-Classes" in December 2018, dividing content into twelve sessions covering patent basics, technical disclosure writing, and patent retrieval and analysis—each approximately ten minutes long and regu-

larly pushed through the library's official subscription account. This has become a branded service of Zhejiang University IP Information Service Center. During the early 2020 COVID-19 period, the center launched "Ten Minutes Daily: Learn About Patents at Home," attracting numerous followers and significantly enhancing its reputation.

**4.5.3 IP Competitions, Resource Promotion, and Popular Science**
The ultimate goal of organizing IP competitions, resource promotion, and popular science activities is to "promote learning through competition and application through learning." Competition-related articles show that over half were promotional notices for IP competitions co-organized with database companies, indicating this as the mainstream approach—for example, the "Future IP Expert" competition co-hosted with Incopat, which attracted nearly 3,000 participants through 海选, preliminary rounds, and a national final. However, readership data shows that faculty and students prefer personalized competitions organized by their own libraries, such as South China Agricultural University Library's "Ketu Cup" IP Knowledge Competition and Shanghai Maritime University Library's "Lingang College Student IP Competition, Inviting You to Join!" (both exceeding 1,000 views). Resource promotion has evolved from single patent resources to diversified content, including not only common patent databases like Derwent, Innography, Incopat, and PatSnap but also patent analysis tools and IP-related books in library collections. Currently, most IP popular science articles focus on World IP Day themes. While 19 libraries published IP popular science content, few offered systematic popular science series.

## 5 Current State of IP Information Services from WeChat Perspective

Although WeChat services cannot provide a complete picture of university IP information services, they offer valuable insights. Analysis across different dimensions shows that the WeChat service model has effectively promoted IP information service publicity, systematic popular science and training, and case demonstrations, becoming one of the most effective service approaches. Compared to the exploratory stage of a few years ago [9], recent years have seen significant development in planning and management systems, talent team building, and service content expansion, demonstrating vibrant growth.

### 5.1 Planning and Management Systems Gradually Improving

Authorship attribution, column organization, and content in library subscription accounts objectively reflect the management, operational planning, and staffing of university IP information service centers. Our investigation confirmed that libraries with clear columns and authorship have dedicated IP service teams with sound management systems and smooth service planning implementation. For example, Zhejiang University Library maintains two IP activity series throughout the year—"Patent Appointment" and "Patent Micro-Class"—supplemented

by services such as IP resource retrieval and IP value assessment, forming a clear and reasonable service plan available online and offline year-round. Detailed information about dedicated team members is provided in WeChat articles, establishing user trust.

### 5.2 Talent Team Construction Showing Initial Results

WeChat content analysis reveals that libraries are highly active in IP information literacy training, moving beyond traditional librarian lectures to multi-party collaboration for targeted services. They partner with database vendors and university/local IP management departments to invite IP experts for specialized lectures, collaborate with IP-related departments to offer professional courses, and organize thematic conferences to enhance IP literacy and service skills for faculty, students, and practitioners. This has successfully built a multi-module, multi-level training system serving diverse stakeholders [8]. Additionally, service content has diversified beyond training to include IP resources, books, analysis tools, and popular science. Coverage has broadened to include trademarks, copyrights, geographical indications, plant varieties, and other IP-related information in promotional content.

### 5.3 Service Content Expansion and Deepening

University library WeChat accounts show that IP information services have expanded and deepened. In addition to training systems, services cover IP resources, books, analysis tools, and popular science. The scope has broadened beyond patents to include trademarks, copyrights, geographical indications, plant varieties, and other IP-related information in promotional and popular science content.

## 6 Problems and Deficiencies in University IP Information Services

Despite rapid development amid China's transition from an IP 大国 to an IP 强国, analysis of WeChat practices reveals numerous problems and deficiencies in current university IP information services.

### 6.1 Regional Development Imbalance

Geographic distribution of WeChat articles shows significant regional disparities, with libraries in economically developed regions like Jiangsu, Guangdong, Beijing, and Shanghai publishing far more articles than those in other regions. This is because IP resource utilization and technology transfer are closely related to the local technological ecosystem, from scientific innovation to regional industrial chains. Each development stage promotes IP information services. Taking South China University of Technology's IP information service in Guangdong as an example, its practice and exploration oriented toward Guangdong-Hong

Kong-Macao Greater Bay Area technological innovation have created a virtuous cycle where IP information services and technological innovation reinforce each other, placing its services, student innovation, and technology transfer at the national forefront [25].

### 6.2 Unclear Service Positioning and Boundaries

Reading promotional articles reveals little differentiation in specific service content across different types and levels of universities and regions, with services often being overly broad and generic. This likely stems from unclear service positioning and boundaries, which in turn relates to the multiple management authorities for university IP information services and the lack of unified, standardized industry norms. The U.S. Patent and Trademark Office's approach offers a useful reference [26], clearly stating that designated library staff are not patent agents and cannot provide services within the scope of patent agencies, but can provide directories of patent agents and explain patent application processes and fees, making service content and boundaries relatively clear.

### 6.3 Insufficient Collaborative Innovation

While WeChat articles show some cooperative activities between university libraries and other organizations, collaborations are primarily with database vendors closely related to library resource development. Cooperation with other departments and units throughout the entire process of technological innovation and application is insufficient, with obvious deficiencies in collaborative innovation. In today's highly interdisciplinary and integrated scientific environment, libraries cannot effectively sustain IP information services through isolated efforts.

### 6.4 Urgent Need for Overall Planning Improvement

Based on WeChat publication timing, most universities concentrate IP information services around World IP Day in the first half of the year and Patent Week in the second half, creating a perception of discontinuity. Regarding service columns, only a few libraries have reasonably planned IP service columns, while most exhibit inconsistency. In terms of service content, WeChat's more significant role lies in promoting and publicizing IP information services. How to highlight unique advantages and strengths and build brand effects within limited space is a key consideration for IP information service promotion.

### 6.5 Talent Team Construction Requires Further Strengthening

Professional talent teams are essential for sustainable IP information service development. Authorship data shows that only a few comprehensive and specialized universities have achieved initial success in talent team building. Most university libraries face a shortage of IP information service professionals, primarily because job responsibilities and compensation are mismatched, making

it difficult to recruit suitable candidates. Unreasonable internal performance systems also discourage capable staff from remaining in IP information service positions. Therefore, policy optimization and establishment of a rational talent team building system are urgently needed.

## 7 Development Countermeasures for University IP Information Services

To address these problems and deficiencies, university IP information services should capitalize on the momentum of establishing and developing "National IP Information Service Centers for Universities" by strengthening top-level design and alliance building, optimizing service models and content, and establishing evaluation and assessment systems through rational planning and effective implementation to ensure sustainable development.

### 7.1 Strengthen Top-Level Design and Alliance Building

In the current context, establishing and developing university IP information service centers is not merely an internal university project but an important component of the national IP public service system. Top-level design should be strengthened at the national, university, technological industry, and IP service levels to establish a comprehensive, vertically integrated IP collaborative utilization system with unified and effective industry norms and standards. National and local governments and universities should provide strong policy, financial, and resource support, utilizing new service technologies to build forward-looking public IP information service platforms that meet the needs of different service targets and personnel. Building upon existing university IP information service center alliances, close collaboration with IP management departments and industry alliances should be promoted to actively build a grand IP information service alliance, achieving true resource, talent, and service sharing and effectively mitigating regional development imbalances while clarifying service positioning and boundaries.

### 7.2 Optimize Service Models and Content

Establish a multi-stakeholder service model oriented toward industrial demand, encompassing university research management departments, libraries, technology transfer offices, commercial IP service organizations, industry experts, and full-time/part-time teams. Clearly define the roles of different departments and personnel in the IP information service process, selectively determining appropriate responsibilities to leverage respective strengths and concentrate efforts on breakthrough bottlenecks in university IP information services, achieving perfect alignment between scientific achievements and market industries. University libraries, as the main providers of IP information services, should focus on improvements in the following areas:

**7.2.1 Optimize General and Specialized Information Literacy Training System** The WeChat survey shows that IP information literacy training is the most mature service content, but it suffers from homogenization, singular methods, and repetitive courses. Under the guidance of an IP information service alliance, training systems should be rationally planned and developed according to university types, disciplinary characteristics, levels, and regional differences to create nationally recognized branded programs with both industry-specific and general IP education content. Collaborative development and sharing can avoid redundant construction, save resources and labor costs, and promote standardized development of IP information literacy training.

**7.2.2 Establish "Merit-Based" Talent Team Building System** Libraries should build talent teams through both external recruitment and internal cultivation, establishing a "survival of the fittest" system that forms reasonable service echelons and achieves organic growth of dedicated professional teams. Successful experiences show that teams need: 1) Leadership talent as the "team soul" for internal and external communication and coordination; 2) Practitioners with practical IP experience to deliver various services according to demand; and 3) Professionals with service marketing and promotion capabilities to publicize services and showcase achievements through physical and virtual platforms—a crucial yet often overlooked aspect. Libraries can also recruit volunteers or reader-librarians to build a talent reserve and achieve 阶梯式 growth.

**7.2.3 Advance Services in Depth Based on Diverse Needs** Building upon existing services and aligning with the key tasks in the "Several Opinions on Improving Patent Quality and Promoting Transformation and Utilization in Higher Education Institutions," universities should explore classification and grading management methods for IP achievements, establish management systems for existing IP assets, comprehensively evaluate annual patent applications, and provide pre-application technical assessments for faculty, students, and research teams without patent experience. For major research projects, full-process IP services should be provided throughout project selection, initiation, implementation, completion, and technology transfer, combined with market and industrial development needs. Additionally, establish and improve the patent navigation 工作机制.

### 7.3 Promote Establishment of Evaluation and Assessment System

In 2019, the first annual inspection materials were submitted for National IP Information Service Centers for Universities. The inspection report evaluated the 23 established centers across seven aspects: basic conditions, system construction, search analysis, management support services, training services, public services, and research/awards, laying a foundation for assessment. Building upon this, multi-party collaborations through grand alliances, regional alliances,

and industrial technology IP service alliances can explore evaluation demonstrations referencing the selection criteria for National IP Information Service Centers, strictly implementing the "Implementation Measures" requirements regarding management, resources, services, and personnel. Third-party data such as WeChat coverage and actual service verification, peer assessments from IP information service centers, and user evaluations of service quality and personnel should supplement assessment content and methods to establish a long-term evaluation mechanism that standardizes service quality, methods, and processes, ultimately achieving sustainable development of university IP information services.

In today's volatile international situation, IP 强国 policy 布局 is crucial. As an important component of the national IP public service system, university IP information services bear heavy responsibilities. Achieving stable and sustainable development on the fast track of IP information service development requires multi-party collaboration and joint efforts.

## References

[1] Notice of the General Office of the National Intellectual Property Administration and the General Office of the Ministry of Education on Issuing the "Implementation Measures for the Construction of University Intellectual Property Information Service Centers" [EB/OL]. [2020-06-15]. http://www.sipo.gov.cn/gztz/1107796.htm.

[2] Yu Qin. Establishment of an Online Free Patent Database Information Navigation System [J]. Modern Library and Information Technology, 2003(6): 74-76.

[3] Zhang Jing, Guo Ji'an. Research on Patent Information Service Models in University Libraries [J]. Library and Information Service, 2009(S2): 102-104.

[4] Gao Yingying, Li Shanshan. Construction and Application of Patent Information Service Systems in University Libraries [J]. Library and Information Service, 2017, 61(22): 77-81.

[5] Ran Congjing, Song Kai, He Mengting, et al. Construction of University IP Information Service Platforms under the IP Ecosystem [J]. Library Forum, 2020, 40(3): 63-72.

[6] Zhang Shanjie, Yan Xiang, Liu Xiaoqin, et al. Capacity Building of IP Information Services in University Libraries with User Participation [J]. Library and Information Service, 2020, 64(8): 41-48.

[7] Shen Jinhua, Sun Qiaoxuan. Research on Demand-Oriented Capacity Building of Patent Information Services for University Librarians [J]. Journal of Academic Libraries, 2018, 36(5): 73-79.

[8] Wang Liping, Li Zihui, Qin Xia, et al. Research on Training System Design for IP Information Services in Universities [J]. Library and Information Service,

2020, 64(4): 43-51.

[9] Shen Jinhua, Zhang Gengping. Trends and Reflections on Patent Information Services in University Libraries [J]. Journal of Academic Libraries, 2016, 34(6): 51-55.

[10] Gao Xiangrong, Yuan Yongcui, Zuo Wenge. Current Status and Development Strategies of Patent Information Services in "985 Project" University Libraries [J]. Journal of Academic Library and Information Science, 2017, 35(1): 121-124.

[11] Zhou Jing, Zhang Libin, Gu Wenhao. Current Status and Reflections on IP Information Services in Chinese University Libraries [J]. Library and Information Service, 2019, 63(21): 35-46.

[12] Xu Chun, Zhang Jing, Bian Zuwei. Research on Patent Information Service Status and Development Strategies in University Libraries under the "Double First-Class" Construction Background [J]. Library Science Research, 2019(23): 57-64.

[13] Xu Chenchen. Investigation and Analysis of the Current Status of IP Information Services in University Libraries [J]. Digital Library Forum, 2019(12): 66-72.

[14] Zhai Xiaojuan, Zhang Yu, Shi Mei. Research on Online-Offline Integrated New Media Marketing Practices and Strategies in Libraries—A Case Study of Nanjing University Library [J]. Library Theory and Practice, 2020(1): 102-107.

[15] Huang Yi. Research on Information Literacy Education Services via University Library WeChat Public Accounts—A Case Study of "985" Universities [J]. Library Science Research, 2018(24): 71-78.

[16] Lin Hui. Research on Reading Promotion via WeChat Public Platforms of University Libraries in Fujian Province [J]. Library Science Research, 2017, 47(3): 85-91.

[17] Xiao Qiuhong. Design and Implementation of an Ecological Model for WeChat Digital Reference Services in University Libraries [J]. Library Science Research, 2014(12): 85-88.

[18] Xu Chun, Zhang Jing. Development Status and Countermeasures of WeChat Public Account Services in University Libraries [J]. Library Science Research, 2019(23): 57-64.

[19] Xu Sixian. Exploration of Self-Media-Based Patent Information Service Models in University Libraries under the "Double First-Class" Background [J]. New Century Library, 2018(9): 24-27.

[20] University Intellectual Property Information Service Center Alliance [EB/OL]. [2020-03-15]. https://auiipis.tongji.edu.cn/.

[21] Notice on the Announcement of the First Batch of National IP Information Service Centers for Universities by the General Office of the National Intellectual Property Administration and the General Office of the Ministry of Education [EB/OL]. [2020-03-15]. https://www.cnipa.gov.cn/art/2019/3/15/art_{{{53}}}_{{117839}}}.html.

[22] Several Opinions on Improving Patent Quality and Promoting Transformation and Utilization in Higher Education Institutions [EB/OL]. [2020-06-15]. http://www.moe.gov.cn/srcsite/A16/s7062/202002/t20200221422861.html.

[23] Recruitment Notice for Staff of Harbin Institute of Technology Intellectual Property Information Service Center [EB/OL]. [2020-06-15]. http://today.hit.edu.cn/article/2019/12/20/73823.

[24] Recruitment Notice for Full-Time Associate Researchers of Shenzhen University Intellectual Property Information Service Center Project Team [EB/OL]. [2020-06-15]. https://hr.szu.edu.cn/info/1141/3582.htm.

[25] Fan Jiaqiao. Library Patent Information Services for the Guangdong-Hong Kong-Macao Greater Bay Area [J]. China University Science & Technology, 2019(12): 32-35.

[26] USPTO. Patent and Trademark Resource Centers [EB/OL]. [2020-11-18]. https://www.uspto.gov/learning-and-resources/support-centers/patent-and-trademark-resource-centers-ptrecs.

**Author Contributions:**

Song Yumei: Investigation, data collection and organization, paper framework design, writing
Yan Zhe: Literature review, content revision
Zhu Lin: Data collection, text and figure/table revision
Luo Jun: Guidance on writing, suggestions for improvement

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**Present Situation and Development Countermeasure of Intellectual Property Information Service in Universities Were Studied from the Perspective of WeChat Service**

Song Yumei Yan Zhe Zhu Lin Luo Jun
Nanjing University Library, Nanjing 210023

**Abstract:** [Purpose/significance] In order to provide ideas for intellectual property information service of university libraries, intellectual property information service of university libraries was studied from the perspective of WeChat service. [Method/process] The WeChat services of 86 university libraries which have independently established intellectual property information service centers were investigated. Five dimensions were analyzed such as the publication time, signature, service column, reading numbers and content of WeChat articles. [Result/conclusion] The intellectual property information service is in a period of vigorous development. The planning and management system is improving

day by day. Team construction has achieved initial success. The service content is expanded and deepened. However, we should still take the express train of the establishment and development of "National Intellectual Property Information Service Center of Universities", to strengthen the top-level design and alliance construction, optimize the service mode and content, promote the establishment of assessment and evaluation system, and carry out reasonable planning and effective implementation. Only in these ways the intellectual property information service can be sustainable developed.

**Keywords:** academic library intellectual property information service WeChat service

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