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Implications of the European PATLIB Center Project for Patent Information Services in Chinese University Libraries: Postprint

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Abstract

[Purpose/Significance] The European Patent Office has cooperated with EU member states to establish more than 330 PATLIB centers, approximately 37% of which are hosted by universities. An in-depth analysis of the service operation practices of the European PATLIB center project provides important reference value for advancing patent information services in university libraries in China. [Method/Process] This study employs literature research and web-based investigation methods to analyze the implementation status of the European PATLIB center project, focusing on the PATLIB centers established in universities as research subjects to examine their patent information services. [Results/Conclusions] Drawing upon the practical experience of the European PATLIB center project, insights are obtained for developing information service work in university libraries in China, and it is further pointed out that the construction of a patent information service system for university libraries with feedback mechanisms is imperative.

Full Text

Preamble

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Enlightenment from the European PATLIB Center Project for Patent Information Services in Chinese University Libraries

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Abstract

[Purpose/Significance] The European Patent Office has collaborated with EU member states to establish over 330 PATLIB project centers, with approx-

imately 37% hosted by universities. A thorough analysis of the operational practices of European PATLIB centers offers valuable reference for advancing patent information services in Chinese university libraries. **[Method/Process]** Through literature review and web-based investigation, this study examines the implementation of the European PATLIB center project, focusing specifically on PATLIB centers established within universities to investigate their patent information services. **[Results/Conclusion]** Drawing on the practical experience of European PATLIB centers, this paper provides enlightenment for Chinese university libraries' information service work and further emphasizes the imperative need to construct a patent information service system with feedback mechanisms.

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Patents, as a component of intellectual property, represent a crucial source of intelligence. According to the World Intellectual Property Organization (WIPO), 90%–95% of the world's annual inventions can be found in patent literature. In applied technology fields, regular consultation of patent literature can reduce research time by 60% and save 40% of research expenses [1]. Against the backdrop of national strategies for building an intellectual property powerhouse and innovation-driven development, universities—critical institutions bearing national scientific and technological innovation—have urgently demanded library service transformation, making patent information services a key direction for this transition. The “Implementation Measures for the Construction of University Intellectual Property Information Service Centers” jointly issued by the State Intellectual Property Office and the General Office of the Ministry of Education [2] explicitly defines university libraries as supporting institutions for intellectual property services. Consequently, university libraries are gradually becoming the backbone of patent information services.

1. Current Status of Patent Information Services in University Libraries

With support and guidance from relevant national policies, university libraries have successively launched patent information services, generating substantial research. Studies by Zhang Shanje et al. [3] address the limitations of current services, such as singular content and lack of systematic approaches, proposing strategies for university libraries. Gao Yingying et al. [4-5] construct horizontal and vertical patent information service systems to address practical deficiencies. Liu Ying et al. [6] propose a new model centered on user needs, establishing patent information service centers and expanding services and promotion. Zhang Jing et al. [7] build service models based on development needs, while Shen Jinhua et al. [8] predict development toward greater enthusiasm, multi-level content, broader audiences, and more diversified approaches. Wu Ru et

al. [9] identify opportunities and challenges, emphasizing the need to establish talent teams and strengthen inter-institutional cooperation. Gao Xiangrong et al. [10] analyze 39 “985 Project” university libraries, recommending appropriate patent retrieval systems and richer content. Wu Yaping [11] constructs knowledge supply chain-based service models. Liu Yu et al. [12] explore embedded disciplinary service models for research groups. Su Qiuxia et al. [13] plan service processes based on different research stages. Wang Liping et al. [14] discuss content, models, and trends. Zhao Hong et al. [15] analyze current services and propose improvements. Wang Ling et al. [16] examine patent intelligence services throughout the entire research process.

These studies fall into two categories: first, summarizing current practices and proposing future strategies based on status quo [3-6, 9, 11-14, 16-17]; second, conducting surveys to analyze work, construct systems, propose new models, and predict trends [7-8, 10, 15, 18-19]. Research indicates that Chinese university library patent information services remain in initial and exploratory stages, characterized by limited content, singular approaches, and insufficient professional capacity and innovation. Foreign university libraries have advanced further in this domain. Facing new information era challenges, we should boldly and reasonably learn from foreign practices to promote domestic development.

Literature review reveals scarce research on foreign university library patent information services in China. Limited references mention overseas practices: Liu Ying [6] proposes new models based on foreign patterns; Feng Yang et al. [17] summarize development status from resource construction perspectives; Zhu Hongyan et al. [18] survey 14 university libraries domestically and internationally; Feng Jun [19] draws lessons from U.S. PTRC libraries. These studies primarily focus on the UK [6, 18], U.S. [17-19], Japan [17], and Hong Kong, Macao, and Taiwan [18], with only two mentioning Europe (Birmingham Central Library [6] and Cambridge University Library [18]), indicating European patent information services require further investigation. This paper conducts comprehensive research on the European PATLIB center project to provide reference for Chinese university libraries.

2. Interpreting the European PATLIB Center Project

2.1 Distribution of PATLIB Centers

The European PATLIB center project is a patent service initiative jointly established and funded by the European Patent Office (EPO) and member states’ national patent offices. The project has built a vast PATLIB network, growing from 116 centers in 1995 to 331 centers across 37 European countries [Figure 1: see original paper]. Distribution is uneven among these countries [Figure 2: see original paper], with the top 10 being Turkey (64), Poland (27), Germany (23), Portugal (22), Spain (21), France (19), Italy (18), Romania (17), the UK (17), and Bulgaria (13), accounting for 72.8% of the total. Centers are primarily located in national patent offices, public/professional libraries,

universities/university libraries, and other institutions.

2.2 Service Objects, Content, and Support

2.2.1 Service Objects and Content

PATLIB centers evolved from national patent libraries widely distributed across EPO member states. Many centers are housed in national patent offices and universities, providing patent information through searches of existing national and international databases, enabling feasible and convenient communication and collaboration [20]. The project primarily serves students, inventors, researchers, small and medium-sized enterprises (SMEs), patent agents, and the general public. According to national IP systems, many centers provide trademark, design, and utility model information beyond patent searches, develop training programs and courses, proactively contact SMEs, offer assistance, and organize “patent clinics” providing free basic consultation [20]. [Figure 3: see original paper] shows PATLIB centers cover seven IP areas: copyright, designs, patents, semiconductors, supplementary protection certificates (SPC), trademarks, and utility models, with patents, designs, trademarks, and utility models comprising 83% of services.

[Figure 4: see original paper] illustrates specific services: public reading rooms, search services, IP document provision, helpdesk services, IP monitoring, patent data statistical analysis, user training, lecturer services, economic potential assessment of inventions, IP commercialization, patent clinics, and IP strategy development—12 items total, with relatively balanced distribution (4.2%–13.3% each).

2.2.2 Service Support

Under EPO support, the PATLIB center project operates sustainably. The annual PATLIB conference, co-hosted by the EPO’s Vienna sub-office and the host country’s national patent office in different European cities for three days, is a primary service. The conference introduces PATLIB activities in the host country, reports bilateral and multilateral cooperation projects between a country and the EPO, invites speakers from institutions and academia to present work and views on “hot topics,” and simultaneously hosts patent and patent information product exhibitions. All PATLIB activities are free with pre-registration [20].

Another key service is the PATLIB directory, containing contact information for each center and details on their products and services, distributed free to relevant parties. The EPO also provides free CD-ROMs containing patent information.

2.3 Service Operations

Many PATLIB center staff are experienced patent search experts, but centers require higher-level skills: familiarity with local industrial, economic, and business environments to provide valuable services including technical and competi-

tor analysis, patent statistics, patent evaluation/auditing, strategic advice, and commercialization/technology transfer. As public, non-profit entities, PATLIB centers charge only minimal user fees.

Notably, PATLIB centers cannot cooperate directly with the EPO; coordination must occur through national patent offices. Once a regional center receives formal recognition from its national office, it can join the PATLIB network and receive EPO support [21]. Center websites provide information including host institution, mailing address, postal code, website, phone/fax numbers, email, and opening hours, with forum links on each center's webpage [22].

3. Patent Information Services of European PATLIB Centers

Investigating 331 regional centers across 37 countries reveals they are primarily distributed in southern and central Europe. By institution type, they concentrate in national patent offices (13%), public/professional libraries (9%), universities (37%), and other institutions including chambers of commerce and corporate IP centers (42%).

3.1 Determination of Analysis Objects

Given that 37% of PATLIB centers are university-based—a representative proportion—this study selects these as analysis objects. Overlay analysis using Excel shows consistent distribution between overall PATLIB centers and university-based centers, indicating that regions with more centers also have higher proportions hosted by universities.

3.2 Patent Information Services

Visiting target center websites reveals consistent service content across PATLIB centers, categorized into coverage (IP rights covered) and services provided.

3.2.1 Coverage

Services cover seven IP aspects: copyright, designs, patents, semiconductors, SPC, trademarks, and utility models [23]. Countries with more university-based PATLIB centers provide more comprehensive IP coverage. Belgium, Germany, Poland, and Turkey offer all seven aspects. Among 331 centers, 17 countries host university-based centers (46%). shows IP coverage: four countries (23.5%) cover all seven aspects; three countries (17.6%) cover five aspects; eight countries (47.1%) cover four aspects; and two countries (11.8%) cover three aspects. Design and patent services are mature, while semiconductor and SPC services require further development.

3.2.2 Service Content

Services involve 12 aspects: public reading rooms, search services, IP documents, helpdesk consultation, IP monitoring, patent data statistical analysis,

user training, lecturer services, economic potential assessment, IP commercialization, patent clinics, and IP strategy development [23], as shown in .

[Figure 5: see original paper] visualizes three service tiers: First tier (Belgium, Germany, Lithuania, Portugal, Romania, Turkey, Hungary, Poland) provides all 12 services (47.1% of countries, 100% coverage). Second tier (Austria, Latvia, Slovakia) provides 10 services (17.6% of countries, 83.3% coverage). Third tier (Bulgaria, Czech Republic, Denmark, Greece, Iceland, Spain) provides 8 services (35.3% of countries, 66.7% coverage). Services in public reading rooms, search, document provision, helpdesk, lecturer services, and user training are well-developed, while IP monitoring, data analysis, economic assessment, commercialization, patent clinics, and strategy development need strengthening.

3.3 Patent Information Service Practices

Over 300 PATLIB centers across Europe initially aimed to provide patent information services to SMEs, individual inventors, and researchers. How did they evolve into integrated one-stop regional service centers? The German PATON center example illustrates this development.

3.3.1 Patent Data Statistical Analysis Services

With EPO support, PATLIB centers access alliance databases freely, meeting basic needs but lacking statistical analysis functions of commercial databases. The PATON center developed PATONalyst, an Excel-based analysis tool for data analysis and visualization with strong data compatibility, processing patent databases (WPINDEX, DPCI, INPADOC) and non-patent literature (SCI, INSPEC), even open-source patent data (OPS) and CD-ROM data. This software attracts and cultivates users. [Figure 6: see original paper] and [Figure 7: see original paper] show its conceptual model and practice in optoelectronic materials.

PATONalyst provides multi-level statistical analysis based on STN data, supplemented by other sources, importing titles and abstracts in different languages according to user needs, then preprocessing, visualizing, analyzing, and outputting data to generate customized reports. The entire process integrates client communication, requirement refinement, and functional implementation.

3.3.2 Patent Information Value-Added Services

How do PATLIB centers provide value-added services as “intermediaries” and ensure service continuity throughout the user lifecycle? Trust bridges clients and PATLIB centers, built on three supports: (1) providing super-value services matching commercial databases through professional skills; (2) market immersion, packaging services and products, especially regarding competitor resources, to cultivate potential user groups; (3) analysis based on both patent and non-patent literature for more accurate, comprehensive results—outperforming commercial databases and capturing market share. PATON center has practiced these supports for years, stabilizing and expanding its user base and influence.

4. Key Enlightenment from the European PATLIB Center Project

4.1 Alliance-Based Development Mechanism for Resource Sharing

To facilitate patent information utilization and coordination, the EPO and member states jointly established 331 PATLIB centers in national patent offices, public/professional libraries, universities, and other institutions. Under EPO support, each center in this network achieves resource sharing, accelerates information dissemination, and promotes communication and collaboration. This alliance model merits adoption by Chinese university libraries.

Currently, Chinese university library patent information services remain confined within individual institutions, lacking necessary exchange, causing resource waste and hindering information update and dissemination. I propose establishing university library patent information service alliances at the provincial level, expanding nationwide and even internationally. For example, Jiangsu could form an alliance through its “University Library Patent Information Dissemination and Utilization Bases,” with 10 key libraries. Internally, alliances could hold regular rotating seminars 借鉴 PATLIB annual conference experience to strengthen collaboration and invite experts to present on cutting-edge IP topics. Between alliances, while developing respective strengths, they should deepen exchanges, establish unified business norms and service standards, and build communication channels with local IP offices for policy support.

4.2 Emphasize Patent Information Platform Construction and Promotion

Macro-level: 借鉴 the EPO’s PATLIB directory, national and local IP offices should categorize and produce directories of IP service institutions by region, institution type, and service items, promoting them through official portals and printed manuals to provide convenient one-stop services.

Micro-level: University libraries should build patent information service platforms on their homepages including: (1) online consultation; (2) patent information training; (3) patent novelty searches and analysis; (4) patent strategy and early warning; (5) patent evaluation and navigation; (6) patent transfer and transformation. Additionally, libraries should utilize new media (WeChat, Weibo, BBS) for multi-channel promotion, potentially introducing publicity training courses to enhance awareness and skills.

4.3 Strengthen Patent Information Talent Cultivation and Establish IP Service Specialist Systems

Chinese university libraries generally lack professional talent, especially patent analysis experts, hindering service development. European PATLIB centers receive various training opportunities from member states’ patent offices: small

workshops during annual conferences and training programs for users. Consequently, PATLIB staff are knowledgeable, experienced experts.

To ensure user confidence, satisfaction, and dependence, we should 借鉴 PATLIB's successful experience to build high-quality IP specialist teams tailored to local conditions. Beyond basic professional knowledge and search skills, specialists must master IP-related legal knowledge, possess deep analytical tool capabilities, and maintain market acumen. Developing a comprehensive university IP service training system with layered, categorized training can enhance service depth and quality.

4.4 Deepen Service Content, Develop Characteristic Services, and Cultivate User Loyalty

Shen Jinhua et al.'s [8] survey of 664 Chinese universities shows current services involve seven aspects: novelty searches, user training, retrieval, analysis, strategy, early warning, and database construction—far fewer than PATLIB's scope, and mostly superficial (novelty searches, training, retrieval) lacking deep mining and characteristic services.

The UK's Business & IP Centre Newcastle provides “patent clinics” for SMEs in collaboration with local patent attorneys, offering appointment-based consultations. Leeds City Council Business & IP Centre provides value-added services including economic potential assessment, IP commercialization, and strategy development. Universities should develop characteristic services based on their size and disciplinary strengths, deepening content, expanding influence, and shaping service brands.

4.5 Establish Performance Evaluation Systems

A feedback mechanism is crucial for advancing library patent information services. Proper performance evaluation collects, feeds back, and controls information, supervising and promoting services. The key is balancing evaluation and service, avoiding evaluation for its own sake.

4.5.1 Comprehensive and Clear Evaluation Criteria

Indicators should cover four levels: management (system development, duty fulfillment, staffing), service (satisfaction with process, methods, and outcomes), resources (professional databases, platform usage, service depth/breadth), and users (staff competence, attitude, professionalism, and peer review). Fair, open, and impartial standards must apply to all positions.

4.5.2 Regular and Institutionalized Evaluation

Evaluation aims to promote mutual improvement. Regular evaluation identifies strategic implementation problems, tracks action plans, ensures goal achievement, and enhances staff capabilities. Individual performance records inform targeted training development, while process tracking provides comprehensive

understanding of staff performance, ensuring accurate career trend assessment and creating win-win outcomes for users, institutions, and staff.

Institutionalization ensures smooth implementation. To avoid formalism and lack of feedback, performance evaluation must be systematized.

Conclusion

Driven by external policy support and internal demand, constructing a university library patent information service system with feedback mechanisms is imperative. Drawing from PATLIB's enlightenment, accelerating structural adjustment and actively adapting to development trends will be future priorities. Through exploration and practice, university libraries can enhance core service capabilities, demonstrate social service functions and value, and play important roles in national innovation-driven development and intellectual property powerhouse strategies.

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Abstract: [Purpose/significance] The European PATLIB centers project has 331 patent information centers spreading regionally across the EPO's member states. About 37% of them are hosted by European universities. It will provide valuable reference for the patent information service of university libraries in China to study the services of PATLIB centers thoroughly. [Method/process] By browsing the web of the libraries and retrieving documents, it analyzes the services of PATLIB centers. The PATLIB centers in the universities are selected as the research object to investigate the development of patent information service in the European university library. [Result/conclusion] This paper sums up some enlightenments that can be used for reference by Chinese university libraries. Furthermore, the author proposes the following working emphasis that it is necessary to construct the patent information service system of the university library with feedback mechanism.

Keywords: PATLIB, university libraries, patent information service

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

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