

Construction and Reflection of a Teaching Support Service System Based on Disciplinary Characteristics: A Case Study of the Library of Jilin Animation Institute (Postprint)

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Abstract

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Full Text

Construction and Reflection on a Teaching Support Service System Based on Disciplinary Characteristics: A Case Study of the Library of Jilin Animation Institute

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Abstract: [Purpose/Significance] Constructing a teaching support service system that meets instructional needs represents a crucial pathway for university libraries to fulfill their service functions. [Method/Process] By examining teaching service approaches and methods in university libraries both domestically and internationally, and based on an in-depth understanding of our institution's disciplinary characteristics and teaching requirements, this paper clarifies

the pathway for building a teaching support service system grounded in disciplinary features. **[Result/Conclusion]** Through developing special collection resources, delivering subject knowledge services embedded in teaching, and creating distinctive spatial environments, the library can achieve its supportive role in teaching, research, and talent cultivation.

Keywords: disciplinary characteristics; special collection; teaching support service

Providing literature and information support and service guarantees for university teaching, research, and talent cultivation constitutes the core mission of academic libraries. As the digital and networked era continues to evolve, libraries' survival and service environments are undergoing transformation. This injects new vitality into libraries' innovative development and creates conditions for service upgrading, while simultaneously presenting new challenges. How to construct a comprehensive teaching support service system that adapts to external environments, meets readers' changing needs, and aligns with the university's overall development level and educational requirements demands thorough investigation.

2 Current State of Teaching Support Service Systems at Home and Abroad

2.1 International Status

The “father of modern librarianship,” Melvil Dewey, founded the world's first library school in 1887. Based on his advocated philosophy of “practical education,” he proposed that modern university libraries should support teaching activities and serve education and scientific research. In the early 20th century, American academic libraries began providing teaching reference services, and by the 1990s, electronic teaching reference services had emerged on the library service stage. With the development of educational and information technology, American academic library teaching services gradually transformed into comprehensive support for teaching through resources and services, characterized by rich resources and advanced service methods. Traditional library education has gradually been replaced by information literacy education, which has further integrated with university professional curricula, embedding library education into specialized courses. In fact, American academic libraries consider teaching support as their fundamental function and responsibility, with early start and relatively mature development in teaching support services.

The Association of College & Research Libraries (ACRL) stipulated in its 2011 *Standards for Libraries in Higher Education* that “library staff must assume a teaching role, requiring them to collaborate with faculty and others to integrate library collections and services into effective curricular and co-curricular practices for students; embed information literacy learning into disciplines, courses,

and assignments; establish exemplary models of best teaching practices for classroom instruction, online tutoring design, and other practical teaching; provide appropriate and timely instruction in various contexts and participate in teaching using multiple learning platforms and pedagogical approaches; collaborate with campus partners to provide opportunities for faculty professional development; and maintain IT infrastructure to support teaching and learning technological advances” [1]. These regulations demonstrate that library participation in teaching has become a core business that must be developed, gradually transforming librarians into 21st-century research skills instructors through collaboration with personnel and academic colleagues [2].

From 2016 to 2018, the American Library Association’s *State of America’s Libraries Report* consistently proposed that library services should be embedded in university classrooms. The 2016 report mentioned that “libraries are expected to participate more in and provide innovative teaching and research methods, and library staff face the challenge of helping faculty and students maximize library value and encouraging the integration of library products into academics and teaching” [3]. The 2017 report noted that “3,793 academic libraries contributed to teaching, from which it was found that students benefited from library training in their initial teaching processes; library use improved student success; academic projects and services collaborating with libraries enhanced student learning levels; and library information literacy education strengthened the effectiveness of general education” [4]. The 2018 report stated that “academic library staff have provided teaching courses (including face-to-face and electronic courses) to over 6.2 million students, with nearly 43% being digital courses” [5].

Harvard University’s library strategic goals for 2016-2021 specifically propose a “Research and Teaching Section,” stating that “Harvard Library will collaborate with professional faculty and other teaching support organizations to provide innovative and planned support for learning and research; expand the library’s role as an educational partner; and develop and implement strategies to communicate learning, research, and teaching information to students and scholars” [6].

Investigation reveals that American university libraries cooperate closely with teaching departments and deeply integrate into classroom teaching, presenting integrated characteristics in teaching support service forms. Service content ranges from supporting classroom technology application, curriculum design, curriculum transformation, and classroom practice, to supporting digital teaching models and course evaluation systems, knowledge protection and dissemination, and academic publishing; from advanced retrieval techniques to individualized guidance; and from providing teaching reference materials to providing research data, demonstrating diversification, intellectualization, refinement, personalization, and deep-level characteristics.

In summary, influenced by historical background, era environment, educational technology, and educational research, international teaching support service re-

search started early and continuously develops, reaching high levels in service hierarchy, depth, theoretical research, and service effectiveness. Many mature practices in service approaches and content deserve reference.

2.2 Domestic Status

In recent years, driven by network information technology, libraries' external environment has undergone significant changes. Readers have more convenient access to resources, and libraries' traditional services can no longer attract readers to the library, resulting in gradually declining reader dependence on and utilization of libraries. This is particularly true for experts, professors, and researchers, as libraries cannot provide the services they expect. The fundamental reason lies in the mismatch between the literature resources and traditional services libraries can provide and reader needs. These factors compel libraries to seek transformation and development, shifting from traditional libraries to new types of libraries and from basic document services to deep-level information services.

For universities, teaching work is the central task. Serving and supporting teaching demonstrates the core value of libraries. The 2015 *Regulations on University Libraries* stipulate that libraries' main tasks are: "Construct a comprehensive literature and information resource system to provide literature and information guarantees for teaching, research, and discipline construction; Establish and improve the university's literature and information service system to facilitate access to various types of information for all faculty and students." This shows that establishing a comprehensive resource system and information service system represents the current primary task of academic libraries. Driven by external, policy, and internal environments, domestic academic libraries actively utilize modern technological means to improve service conditions, establish subject librarians, develop subject services, teaching reference consultation, and subject information portals to guarantee support for teaching work.

According to the survey data in Liu Lei and Guo Shiyun's article *Investigation and Analysis of the Current Status of Teaching Support Services in Domestic University Libraries* on teaching support services offered by the top 50 universities in the 2015 *China University Evaluation Report*, domestic university teaching support services mainly focus on three aspects: librarians, information resources, and space/facilities. Librarians primarily provide embedded teaching services, information literacy education, reference consultation, and personalized services. In information resources, this is mainly reflected in teaching reference resources, OA resource navigation, and subject service platforms to support teaching. In space/facilities, discussion rooms, information commons, and characteristic spaces meet readers' personalized needs. Only 10 institutions offered embedded teaching services, and 24 established subject service platforms [7]. Among them, Shanghai Jiao Tong University Library has innovated in embedded teaching services, electronic teaching reference services, characteristic space services, and facility services. It offers a fully embedded 16-hour *Literature Re-*

trieval and Interpretation course, pioneered the “Smart Ubiquitous Classroom,” provides over 6,700 electronic teaching reference books for more than 1,400 courses, opened a “New Technology Experience Zone,” and launched mobile learning terminal lending services. The library’s mechanical power subject service team collaborates with teaching faculty to seamlessly embed throughout six main stages of instructional design, conducting beneficial attempts and practices in comprehensive embedded teaching collaborative innovation, and has achieved phased results and practical experience.

As the earliest domestic library to establish a “subject librarian system” in 1998, Tsinghua University Library began constructing a teaching reference system in early 2002, with its teaching reference service platform being one of the earlier teaching support service platforms in China [8]. The platform was trial-operated in 2003 and revised in July 2014. Based on four stages—teaching planning, teaching implementation, teaching evaluation, and teaching reflection—it develops teaching support services. In the teaching planning stage, it establishes specialized branch libraries and subject librarians, implements patron-driven acquisition, and integrates teaching resources. In the teaching implementation stage, it creates subject navigation, establishes open course navigation, co-builds online learning centers, and configures databases. In the teaching evaluation stage, it conducts subject librarian teaching evaluation, surveys student utilization of library resources, and monitors teaching reference service conditions. In the teaching reflection stage, it provides frontier literature analysis in disciplines, holds information literacy training, and co-manages online knowledge communities. The characteristic of Tsinghua University Library’s teaching reference service platform lies in achieving integration between course information and teaching reference resources, transforming from single-document-type to multiple-type teaching reference resources, and implementing full-text access control and mobile reading [9].

Professor Chu Jingli, Director of the Department of Library, Information and Archives Management at the University of Chinese Academy of Sciences and Editor-in-Chief of *Library and Information Service* magazine, proposed in his May 25, 2018 report *New Era Libraries and New Service Capacity Construction* in Changchun that the complete meaning of subject service is “embedded subject knowledge service.” For universities, there must be “direct support,” meaning specialized teams must integrate into users’ work environments, teaching environments, research environments, and creative environments to know what users need in real time, thereby formulating practical service strategies. At the same time, users are invited into the library, encouraging and guiding faculty and researchers to utilize collection resources. Investigation shows that routine services are more common while characteristic services are relatively few; traditional service content is more prevalent while new subject knowledge service content is less common, with direct support effects not being obvious. Compared with foreign university libraries that directly undertake teaching tasks and conduct in-depth cooperation with teaching units, there remains a significant gap.

3 Approaches and Practice in Constructing a Teaching Support Service System

The disciplinary characteristics of higher education institutions represent the core competitiveness of school development, demonstrating educational strength and teaching levels. The construction of a library teaching support service system should first fully consider the importance of prioritizing service to the university's characteristic disciplines and key programs; secondly, it should focus on analyzing the achievement of different teaching objectives and the differential needs of different levels of readers at specific stages to formulate effective service strategies. Therefore, the construction approach of the teaching support service system at the Library of Jilin Animation Institute (hereinafter referred to as "our library") prioritizes service to the university's characteristic disciplines. Across three dimensions—characteristic literature support, librarian service support, and spatial environment support—the main pathways involve constructing characteristic collection resources, delivering subject knowledge services embedded in teaching processes, and creating distinctive spaces to achieve support and guarantee functions for teaching literature resources services. The construction pathways of the teaching support service system are shown in Figure 1 [Figure 1: see original paper].

3.1 Supporting Characteristic Programs with Special Collections

Resource system construction forms the foundation and prerequisite for building a library teaching support service system. Only when resource construction aligns with the development of the university's disciplines, especially key disciplines and advantageous programs, and adapts to the university's educational and developmental needs can the library's core value be demonstrated. Therefore, library literature resource construction should tilt toward characteristic disciplines and programs, prioritizing the construction of disciplinary characteristic collection resources. This requires mastering detailed information about the university's key disciplines, including their levels, characteristics, and development directions, and clearly recognizing that different levels of disciplines have different literature resource construction standards, thereby formulating appropriate disciplinary characteristic collection construction strategies to ensure key support and information guarantee functions for characteristic discipline construction.

Jilin Animation Institute is a private higher art institution with distinctive educational characteristics, forming a talent cultivation model integrating learning, research, and production that is teaching-led, research-supported, and industry-oriented, achieving a development pattern where the three major sectors of learning, research, and production mutually support and positively interact. Jilin Animation Institute has five disciplinary categories: art, literature, management, economics, and engineering, with 30 programs, including 20 art programs, 5 engineering programs, 2 management programs, 2 literature programs, and 1 economics program. Among them, there is 1 national characteristic program, 3

provincial characteristic programs, and 3 provincial brand programs.

Currently, our library has formed a characteristic collection system based on art, with animation, digital media arts, digital media technology, and visual communication design as the core, and software engineering, architectural design, fashion design, and aerospace categories as support. Art literature accounts for 23% of the total collection, animation theory, technique, and works account for 20% of the art collection, and animation graphics processing software literature accounts for 45% of the computer science collection, as shown in Figure 2 [Figure 2: see original paper].

3.2 Building Diversified Digital Resources

Information resource construction follows the principle of “local ownership + sharing” to build a digital resource guarantee system serving four aspects: education and teaching, academic research, faculty development, and characteristic professional resources. Resource collection strives to meet the needs of the university’s characteristic disciplines and key program construction.

(1) Education and Teaching Resources:

Professional education resources include the National Animation Public Material Database, Spanish Linksbooks Architecture Resource Database, Yachang Art Book Database, and WIS Foreign Language Books (Art Category); as well as carefully selected Duxiu Excellent Courses, National Excellent Course Resource Network, Chaoxing Famous Teacher Lectures, China Famous University Excellent Course Resource Service Platform, and ArBase Chinese Art Education Classroom Database.

General education resources aim to broaden students’ knowledge horizons, cultivate thinking abilities, improve general competencies, and increase career readiness, helping students become individuals with sound personalities, rich backgrounds, good character, and excellent work capabilities. Specific resources include the iLearning Foreign Language Self-Study Resource Database, FIF Foreign Language Learning Resource Database, New Oriental Multimedia Learning Library, and Edison Online Lecture Hall.

Practical education resources include the Global University Student Innovation and Entrepreneurship Database, with over 4,000 intermediate and advanced courses on innovation and entrepreneurship, serving the university’s “Internet + Innovation + Entrepreneurship” education model. Also included are the VIPEXAM Exam Learning Resource Database and VERS Exam Resource System.

(2) Academic Research Resources: These are full-text academic literature databases, specifically including CNKI, VIP, Wanfang, WIS Academic Data, CASHL, CALIS Foreign Language Journals, and CADAL Digital Library.

(3) Faculty Development Resources: Aimed at enhancing faculty and students’ artistic cultivation and appreciation abilities, including the Chinese Dy-

nastic Collection Painting and Calligraphy Digital Resource Database, World Oil Painting Digital Resource Database, and ArtLib Art Appreciation Database.

(4) Professional Characteristic Resources: Professional resource navigation is divided into foreign and domestic professional resource navigation. Foreign professional resource navigation includes World Animation Network, Cartoon Brew, Cartoon Brew Animation Education, Cartoon Research, ManTalk, and COOLSHOWCASE. Domestic professional resource navigation includes New Animation Network, Mars Era, China Animation Network, Nipic, Design Online, Visual China, Blue Ideal, and Iosteps.SG.

4 Subject Librarian Service Support

Subject librarians are the executive 主体 of library subject services. To enhance service effectiveness and truly achieve seamless integration between services and needs, they must both “go out” and “bring in.” Subject librarians must integrate into users’ work environments, teaching environments, research environments, and creative environments to know what users need in real time, thereby formulating practical service strategies. Simultaneously, users are invited into the library, encouraging and guiding faculty and researchers to utilize collection resources. User needs are taken as the orientation, subject knowledge and intelligence professional capabilities as the foundation, and collaborative interaction as the means to analyze, excavate, organize, and integrate available resources, providing more precise, diversified, and personalized subject knowledge services for teaching and research. The main approaches are “customization” and “collaboration.”

4.1 Developing Customized Push Services

Customized Excellent Courses: Curriculum and teaching content constitute the core task of university talent cultivation and represent an important link for libraries to develop teaching support services. Based on the “semester course plans” submitted by each teaching unit, our library focuses on collecting and screening national, provincial, and university-level excellent courses, matching them one-to-one with courses offered by each school, and proactively pushing relevant excellent course teaching videos, course introductions, teaching units, teaching points, syllabi, and related reference textbooks to faculty to support teaching activities. The customized excellent course process is shown in Figure 3 [Figure 3: see original paper].

Customized Research Intelligence: According to teaching and research project initiation, we provide full-process tracking knowledge and information services from project selection, application, research, conclusion, achievement evaluation, and achievement transformation. We provide intelligence information such as academic trend analysis, latest research progress and academic dynamics of peers, and technical hotspot reports in disciplinary fields to support scientific research.

Customized Industry Information: Subject service teams closely track domestic and international information related to the integration of learning, research, and production and professional characteristic disciplines, such as disciplinary industry dynamics, big data, theoretical research achievements, academic hotspots, management insights, and exhibitions/competitions. They compile the *Integration of Learning, Research, and Production Information Resources Selected Journal* in monthly form to provide literature and information services for leadership decision-making, teaching, and research, while also supporting the university's integrated learning-research-production education model. To reflect information timeliness between issues, they also compile *Integration of Learning, Research, and Production Information Resources Express* or special issues.

4.2 Developing Collaborative Practical Teaching

Collaborating with professional teachers to combine classroom teaching with practical teaching, the library utilizes its professional resource advantages to connect with professional course teaching, conducting 1-2 class hours of practical teaching in the library each semester. For example, the School of Design has set up library practical teaching sessions in its teaching schedule, requiring students to consult professional literature for design, creation, and innovative thinking material preparation. In the library, they search, consult, study, and copy works and writings of painters and designers, understanding detailed information about different eras, styles, schools, and designers to prepare knowledge reserves for the next learning stage. In 2016 alone, 25 faculty members and 690 students from the School of Design conducted practical teaching in the library, totaling over 30 class hours.

The library collaborates with various schools to conduct faculty information literacy education through small-scale, regular thematic training that is more targeted and can solve practical problems. Meanwhile, subject librarians have accumulated teaching experience in information literacy education through long-term reader training for schools. Additionally, faculty increasingly recognize the importance of information literacy education and have established good trust relationships with subject librarians through the library's subject services. This also signifies that the library's subject services are transitioning from subject librarians providing one-way services to faculty toward multi-level collaborative models between subject librarians and faculty.

5 Space and Environmental Support

As one of the library's "three elements," space has become an important link in library function 重塑. From traditional reading spaces to information commons and then to learning commons construction, there is greater emphasis on reader experience, providing diversified learning, creation, and experience environments. Our library has successively built specialized branch libraries, learning commons, characteristic experience centers, art creation studios, Maker

Star live-streaming classrooms, themed book houses, and information literacy education spaces, achieving transformation from storage space to open space and from single to diversified space functions.

5.1 Subject Branch Libraries

Providing diversified subject services for characteristic disciplines and key programs is the focus of specialized branch libraries, fully embodying the principle of tilting library resources and services toward characteristic disciplines and key programs. This brings professional resources and subject services closer to teaching and permeates teaching. It changes the traditional single resource collection and lending function of branch libraries, highlighting subject services as a practical measure for entering schools. With subject librarians' technical advantages and relying on professional resources, teaching support services are developed. Our library has established three subject branch libraries: the Animation and Gaming Subject Library, the Design Subject Library, and the Fine Arts Subject Library. Subject librarians in these branch libraries undertake information literacy training, resource utilization guidance, proxy searching, document delivery, and excellent course pushing for disciplines covered by the branch libraries. The structure of subject branch libraries is shown in Figure 4 [Figure 4: see original paper].

5.2 VR Experience Center

The Animation Design VR Panorama Demonstration Center uses virtual reality technology to achieve panoramic display of real animation production environments and characters. It transforms the entire animation production process from early planning to mid-production and post-production, converting two-dimensional planes into three-dimensional 立体, transforming ideas into animation works, inserting relevant knowledge introductions into production stages, and demonstrating disciplinary advantages through every detail to provide students with more realistic experiences, deepen impressions of animation production knowledge, and enhance their desire to explore animation learning. It also enables students outside the animation major to gain more genuine understanding of animation production and popularizes animation knowledge.

5.3 Faculty-Student Works Exhibition Hall

The 1,000-square-meter Faculty-Student Works Exhibition Hall regularly conducts excellent works display and exchange activities, centrally displaying outstanding graduate works, various award-winning competition works, themed creative works, etc., to showcase teaching achievements and students' professional abilities, while also providing students with high-quality learning models and sources of creative inspiration.

5.4 Art Creation Studio

The library has established faculty art creation studios equipped with professional books on painting, design, and calligraphy to provide spatial environment support for faculty artistic creation.

In addition, the library has opened Maker Star live-streaming classrooms, learning exchange spaces, themed reading book houses, and information literacy education spaces, possessing diversified space functions.

6 Conclusion and Reflections

The construction and improvement of university library teaching support service systems have systematic, continuous, and dynamic characteristics, with content adapting timely responses and adjustments according to changes in external and internal environments. The distinctive feature of the teaching support service system construction at Jilin Animation Institute Library lies in prioritizing support for characteristic disciplines and key programs, adopting a reader needs-oriented approach, constructing resources and services at different levels, and achieving teaching support through three aspects: characteristic literature support, librarian service support, and spatial environment support, with preliminary effectiveness already visible. Because characteristic resource construction is fully based on professional levels, reader types, and educational hierarchies, resource directionality is more explicit and utilization rates have significantly improved. With the development of customized services and collaborative practical teaching, the number of consultations, services, customizations, collaborations, and pushes has increased.

To better apply the teaching support service system in practice, we must learn from and draw on the advanced concepts and mature experiences of foreign university libraries, making improvements in four aspects: In service philosophy, transform from “participating in” teaching activities to “undertaking” teaching tasks, changing from passive to active, but the premise is that subject librarians possess the skills, teaching innovation, and direction capabilities to lead and support new university learning; In institutional function setting, the library should establish specialized institutions, equip specialized personnel, and provide special funding support; Redefine librarian responsibilities—the 主体 of subject services are librarians, whose teaching ability, research ability, and service ability directly affect teaching support service effectiveness. Drawing on foreign university library librarian systems and evaluation systems to evaluate librarian capabilities, the library needs to add faculty series positions in addition to librarian series; In system construction, besides the three elements of resources, personnel, and space, we should enhance new technology transformation capability, namely technical support, to adapt to new technology applications.

To enhance the application effectiveness of the teaching support service system, breakthroughs must also be made in top-level and bottom-level design, refining

resource hierarchies, reader hierarchies, librarian hierarchies, and service hierarchies to achieve seamless integration between resources and needs and between services and needs. Simultaneously, we must continuously track and research changing reader needs to formulate and adjust system structures and service strategies.

The teaching support service system proposed by the author still requires adjustment and improvement based on actual operation conditions and reader feedback, such as issues including the need for further optimization of the characteristic resource system, relative shortage of foreign language professional resources, lack of teaching reference services, and insufficient modern technology application, all requiring further research and exploration.

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Construction of Teaching Support Service System Based on Discipline Characteristics ——Taking the Library of Jilin Animation Institute as an Example

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Keywords: disciplinary characteristics; special collection; teaching support service

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

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