

Exploration and Analysis of the Construction of Joint Training Bases for MLIS Professional Degree Graduate Students: A Case Study of Northeast Normal University (Postprint)

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Abstract

[Purpose/Significance] The construction of joint training bases constitutes a bottleneck in the national initiative to vigorously develop professional degree graduate education; the cultivation of Master of Library and Information Science (MLIS) graduate students urgently requires breakthroughs in this area to enhance educational quality. [Method/Process] This study reviews policy documents on professional degree talent cultivation, analyzes the “Development Plan for Professional Degree Graduate Education (2020-2025)”, and investigates persistent issues in professional degree graduate training, including the weakening of joint training bases, the formalistic implementation of the dual-mentor system, and academic orientation overshadowing professional focus. It further examines the collaborative initiatives between Northeast Normal University Library and the Library and Information Science program in establishing a joint training base, encompassing institutional mechanisms, development planning, assurance of base advancement, and mentor training, while elucidating the model of integrating library business development with joint training base construction. [Results/Conclusion] The findings demonstrate that joint training base construction not only facilitates library development but also serves as an effective pathway for improving quality and expanding capacity in library and information science professional degree education.

Full Text

Discussion on the Construction of a Joint Training Base for Professional Degree Postgraduates in Library and Information Science: Taking Northeast Normal University as an Example

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Abstract: [Purpose/Significance] The construction of joint training bases represents a bottleneck in the national effort to vigorously develop professional degree graduate education. To improve educational quality, library and information science professional degree postgraduate training urgently needs to overcome this constraint. [Method/Process] This paper reviews policy documents on professional degree talent cultivation, analyzes the *Professional Degree Graduate Education Development Plan (2020-2025)*, and investigates persistent challenges in professional degree postgraduate training, including weakened joint training bases, superficial implementation of the dual-tutorial system, and academic-oriented training models that overshadow professional development. It examines Northeast Normal University's collaborative initiatives between its library and library and information science program in establishing a joint training base, covering institutional mechanisms, development planning, advancement safeguards, and instructor cultivation, while explaining how the library integrates its service development with base construction. [Result/Conclusion] The findings demonstrate that joint training base construction benefits library development and serves as an effective pathway for enhancing both quality and capacity in library and information science professional degree education.

Keywords: professional degree; postgraduate education; joint training base; dual-tutorial system

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Developing professional degree graduate education constitutes an inevitable choice as China's economy and society enter a high-quality development phase, representing a strategic priority for reform and development in graduate education. Industry-education integration and joint training base construction form the core approach for improving professional graduate education quality and capacity, as well as the cultivation model promoted nationally [1]. Northeast Normal University Library has collaborated with the School of Information Science and Technology to establish a joint training base for library and information science professional degree postgraduates, conducting practical explorations of this collaborative model.

China implemented the professional degree education system in 1991, achiev-

ing a historic shift from 单一的 academic degrees to a system where academic and professional degrees hold equal importance. In September 2020, the Academic Degrees Committee of the State Council and the Ministry of Education jointly issued the *Professional Degree Graduate Education Development Plan (2020-2025)*, establishing the vigorous development of professional degree graduate education as a national priority. The plan aims to add new master's and doctoral professional degree categories by 2025, expand master's professional degree enrollment to approximately two-thirds of total master's enrollment, and significantly increase doctoral professional degree enrollment, ushering in a new development period for professional degree graduate education.

Currently, library and information science only offers master's professional degree authorization, with no doctoral authorization points. Master's professional degree graduate education requires industry-education integration and joint training base construction to enhance quality and capacity, while simultaneously creating conditions and laying foundations for securing doctoral professional degree authorization. The *Professional Degree Graduate Education Development Plan (2020-2025)* stipulates that doctoral professional degree authorization points should generally have a solid master's professional degree development foundation, prioritize industry-education integration and industry collaboration as key conditions for authorization, and not require prior acquisition of doctoral academic degree authorization. Therefore, summarizing joint training base construction experience, improving industry collaboration mechanisms, and solidifying training systems are essential for meeting challenges and seizing opportunities.

1 Literature Review

Research on the theme of “professional degree joint training” is extensive, primarily concentrated in medicine, architecture, materials, business administration, accounting, civil engineering, and other fields, mostly involving university-enterprise collaboration. Research findings on “joint training bases for library and information science professional degree postgraduates” remain scarce. Drawing upon relevant disciplinary research on joint training base construction, training models, and the “dual-tutorial” system, we present the following analysis.

1.1 Joint Training Base Construction

A training base is a talent cultivation platform jointly established by training institutions and industries, enterprises, or social organizations to strengthen practical ability training for professional degree postgraduates. It serves as the primary venue for professional practice and an important carrier of industry-education integration. Strengthening base construction is crucial for ensuring training quality [2]. The Ministry of Education's 2002 *Several Opinions on Strengthening and Improving Professional Degree Education* emphasized enhancing practical components and creating stable practice bases. Subsequent

documents in 2010, 2015, and 2020—including the *Guiding Opinions on Implementing Comprehensive Reform of Professional Degree Graduate Education*, the *Opinions on Strengthening Case Teaching and Joint Training Base Construction for Professional Degree Postgraduates*, and the *Professional Degree Graduate Education Development Plan (2020-2025)*—repeatedly emphasized joint training base construction, demonstrating national priority.

Academic research on joint training bases focuses on construction problems, mechanisms, and disciplinary practices. Base selection emphasizes alignment with professional characteristics [3], large business scale, and well-developed practical teaching facilities [4]. Management research advocates applying total quality management theory [5]. Mechanism studies examine improving benefit-sharing cooperation, optimizing instructor selection, clarifying rights and responsibilities, and strengthening communication feedback [4]. Across disciplines, research reveals common problems of superficial collaboration and inadequate practice implementation.

1.2 Joint Training Programs

Research on disciplinary training programs emphasizes practical teaching, proposing various models including “industry-university-research” integration, “three-push-one” [6], “324” [7], and “1135” [8] models, each with distinct curricula. While sharing commonalities, these models exhibit clear professional characteristics and industry specificity, offering limited direct reference for library and information science. Investigation of domestic MLIS training programs reveals that theoretical courses significantly outweigh practical ones, with some practical courses still delivered through traditional lecture methods. Programs require 6 months of professional practice during 2-3 years of study, but implementation remains clearly insufficient. Minimum credit requirements vary from 35-38 credits, with professional practice typically accounting for only 6 credits—some institutions require 32 total credits with merely 3 credits for practice, demonstrating insufficient emphasis. Additionally, teaching materials lag behind practical developments in big data, cloud computing, internet, and IoT. Course design should feature concise theoretical components and increased case-based teaching [9]. Although some universities are increasing practical course proportions, practical teaching still fails to meet training requirements, remaining a weak link in professional master’s education, particularly in humanities disciplines [10].

1.3 Dual-Tutorial System

In 2017, the State Council explicitly proposed implementing industry-enterprise joint training mechanisms like the “dual-tutorial” system. In MLIS education, this system typically involves selecting an additional practitioner from libraries or external enterprises to supplement the academic advisor. However, practical implementation faces problems including unclear responsibilities, uneven allocation, low participation from external tutors, and poor communication [11].

Similar issues appear in other disciplines like accounting and pharmacy [12-13]. Comparative analysis of recent MLIS and academic degree thesis topics reveals minimal distinction, with the “academic-led professional” model predominating, lacking industry relevance, rendering the dual-tutorial system formalistic, with academic advisors dominating the entire process and practice tutors participating inadequately.

In summary, disciplinary joint training base construction exhibits distinct characteristics and significant variation. While medical master’s training systems are relatively mature, other disciplines commonly face weakened base construction, formalistic dual-tutorial systems, and pervasive “academic-led professional” models—problems equally present in library and information science professional degree training.

2 Problems and Causes in MLIS Education

In May 2010, the State Council’s Academic Degrees Office approved the establishment of the library and information science professional degree. By 2019, China had 49 MLIS training institutions [14]. Despite continuous efforts to strengthen practice-oriented training and involve practitioners in teaching, the overall lack of joint training bases and inadequate industry collaboration mechanisms affect applied talent cultivation quality.

2.1 Weakened Function of Joint Training Bases

MLIS training institutions maintain 0-24 practice bases [15], but many collaborations lack substantive partnership. These bases function merely as internship units for students to understand industry conditions and fulfill practical requirements—essentially internship bases rather than joint training bases. Partner organizations’ primary business is not training MLIS students, nor is this incorporated into their development planning. Ideally, partner organizations’ business planning should be forward-looking and guide research. The weakened function of joint training bases into simple internship bases results from inadequate institutional mechanisms that reduce practitioners’ enthusiasm and participation.

2.2 Difficulty Breaking Through “Academic-Led Professional” Model

MLIS training primarily targets practical needs in libraries and information service institutions, emphasizing practical application, cross-cultural communication, and proficient application of management, law, economics, and computer science to solve real-world problems [16]. Current professional training evolved gradually from academic degree training, with faculty primarily comprising academic advisors whose approaches require transformation. Many advisors simultaneously supervise both academic and professional master’s students, creating excessive workload and pressure. Academic advisors focus on theory with limited in-depth practical research. Although some institutions attempt reforms,

progress remains slow, making the “academic-led professional” problem difficult to overcome.

2.3 Dual-Tutorial System Becomes Mere Formality

Many institutions have established dual-tutorial systems where academic advisors provide primary guidance while practice tutors participate in practice, project research, coursework, and thesis supervision. In reality, practice tutors rarely participate, with some never engaging in any student training. The 2013 *Opinions on Deepening Professional Degree Postgraduate Training Model Reform* encouraged institutions to develop separate evaluation criteria for professional and academic advisors, gradually forming stable professional degree advisor teams. The *Professional Degree Graduate Education Development Plan (2020-2025)* explicitly requires new professional degree advisors to have at least six months of industry practice or experience leading industry research projects, and current advisors should annually lead student field research. Existing advisors have not yet met these requirements.

In conclusion, research findings align with practical problems. Despite achievements, MLIS education still falls short of national requirements. The perception prioritizing academic degrees over professional degrees requires correction, as does the practice of simply applying academic degree development concepts. Joint training base construction and industry-education integration mechanisms need improvement, internal management mechanisms require innovation, and applied talent cultivation quality demands enhancement. Northeast Normal University’s collaborative practice between the School of Information Science and Technology and the Library offers valuable lessons.

3 Northeast Normal University’s Joint Training Base Practice

Northeast Normal University became the third institution after Wuhan University and Peking University to establish a library science program. It enrolled undergraduates from 1980 and began admitting MLIS students in 2015. The university has long emphasized practical teaching, with the library serving as a traditional practice base. Under university leadership and coordination, the library and MLIS program have established strong cooperation and created an integrated training model.

3.1 University Coordination and Institutional Mechanism Establishment

Joint training base construction is fundamental to professional degree postgraduate training and a long-standing challenge. The core issue is the lack of mutually beneficial relationships between partners. Academic institutions expect greater investment from bases, while industry partners—core base builders—perceive in-

sufficient benefits, lacking enthusiasm and passively providing internship venues. This superficial collaboration fails to achieve applied talent cultivation goals.

Northeast Normal University coordinates stakeholder interests through unified development planning, policy preferences, and human, financial, and material support. The school and library form a stakeholder organization, with the school incorporating library backbone staff into its faculty, expanding teaching resources while stimulating librarians' research enthusiasm. As the base construction 主体, the library receives university support, actively develops the base, enhances its academic status, and transforms from an information resource service provider to a compound entity combining services and talent cultivation. The MLIS program and library complement each other, building a sound benefit-sharing cooperation mechanism.

Additionally, partners have established instructor selection, rights-responsibility constraint, and communication feedback mechanisms. Practice tutor selection requires a library and information science background, associate research librarian or higher rank, and demonstrated practical research projects or achievements. The MLIS program incorporates these tutors into unified management. The library fully supports practice tutors' teaching, counting it as part of job responsibilities. Clear construction 主体, responsibilities, and training tasks are defined. To synchronize learning tasks with practical research, both parties assign dedicated coordinators for base training liaison, full participation in program development, dynamic follow-up during training, and timely communication to improve effectiveness.

3.2 Base Construction 主体 Responsible for Advancement Safeguards

Professional degree graduate education aims to cultivate applied advanced talents who can lead industry development, drive innovation, and improve efficiency. Correspondingly, joint training bases must maintain advancement and cutting-edge relevance, synchronizing with industry needs and technological progress to cultivate seamlessly integrated talent. To ensure base advancement, Northeast Normal University Library established a Research and Development Department to plan base construction in conjunction with MLIS practical needs. For years, the library has tracked national economic, social, and industry development policies and documents, pursued academic frontiers and technological progress, and strived to maintain domestic leadership and international alignment in all business areas, creating a solid foundation for the joint training base.

In 2010, the library partnered with Israel's Ex Libris Group to establish a "Cloud Services Research and Test Center," and in 2011, collaborated with TRS Database Software Company to establish the "TRS-Northeast Normal University Knowledge Organization and Mining Test Center." Both centers provide quality practice platforms for professional degree training. The library is among the first batch of "National Key Ancient Books Protection Units," "National

Reading Demonstration Bases,” and “National Patent Document Service Outlets,” and one of the Ministry of Education’s largest sci-tech novelty search stations. In 2019, it became one of the first “University National Intellectual Property Information Service Centers,” and in 2020, a Ministry of Industry and Information Technology National SME Public Service Demonstration Platform. By continuously pursuing business frontiers and industry leadership, the library ensures the joint training base’s advancement.

3.3 Emphasis on Professional Compound Practice Tutor Cultivation

Joint training bases require professional compound industry experts to join applied talent training teams. Northeast Normal University Library focuses on cultivating practice tutors in seven directions: digital library construction, knowledge organization and management, educational teaching services, cloud computing, reading promotion, metadata, and intellectual property information services. It selects key business backbone in each direction, requiring three competencies: (1) mastery and flexible application of relevant standards and industry norms; (2) ability to research business, track progress and technological advances, and conduct related construction; (3) ability to cultivate students.

The library and MLIS program jointly organize academic seminars, hosting five major domestic and international conferences in the past five years to promote integration of practical and theoretical research. The MLIS program actively invites library tutors to participate in academic activities like master’s and doctoral forums. To enhance and optimize practice tutors’ comprehensive abilities, the library has intensified talent introduction and cultivation, recruiting and developing eight PhDs, establishing partnerships with George Washington University, Ohio University, University of Illinois at Urbana-Champaign, Stony Brook University, and the University of Ioannina Library, and securing exchange opportunities to send staff for long-term and short-term training in the US and Japan. Six staff members have been appointed as professional master’s tutors, providing dual-tutorial system guarantees.

3.4 Unified Planning of Library Development and Joint Training Base Construction

Based on its own business development needs, the library incorporates joint training base construction into its development planning, synchronizing it with business construction for integrated development.

3.4.1 Digital Library Construction Integrated with Base The library and MLIS program jointly established a digital library laboratory. To support practical teaching, the university supported the library’s introduction of advanced Ex Libris digital library software, establishing a strong partnership with the company. Ex Libris provided a full suite of digital library software and technical support, including: Alma unified resource management system, Primo

one-stop knowledge discovery and service system, Summon academic search resource discovery system, Leganto reading list solution, Rosetta digital asset preservation system, ALEPH library automation system, SFX open link system, and bX academic recommendation service. Northeast Normal University provided hardware, network, and personnel support.

The library established two parallel systems: one for digital library construction and one for the joint training base's digital library experimental platform. The library conducts full software testing on the base's platform to accumulate application experience before implementing successful approaches in the operational system with full data for stress testing and iterative improvement. These successful experiences and technologies are then applied to talent cultivation at the base, achieving a cycle of business research results feeding back into training.

3.4.2 Educational Teaching Services Integrated with Base Serving education and teaching is a university library's responsibility. Northeast Normal University Library collaborates with the academic affairs department to operate, maintain, and develop the Blackboard (Bb) platform, supporting digital teaching experiences for all faculty and students. As a world-class digital teaching platform and leader in comprehensive education informatization solutions, Bb serves over 19,000 institutions in more than 100 countries, with 72% of the world's top 200 universities using the platform.

Based on base training needs, the library established a Course Services and Teaching Support Center to conduct comprehensive Bb platform application research, forming a support system covering personnel, teaching resources, and system maintenance technology. This system serves the entire teaching process across all schools, including pre-class, in-class, and post-class services, mastering system operation, data management, resource integration, paperless examinations, data collection and organization, MOOC construction, platform training, online course evaluation, and teaching resource network construction. These technologies, skills, and experiences, along with the Bb platform, are applied to joint training base construction.

3.4.3 Literature Database Construction Integrated with Base Northeast Normal University Library began literature digitization using TRS database construction software, building 25 characteristic databases including Northeast literature image databases, local gazetteer databases, and dissertation databases. Its World Classical Civilization Literature Database was featured on CCTV. During information resource database construction, applied research and practice proceed simultaneously, with research aiming to reserve knowledge and skills for the joint training base. Through studying TRS software, metadata, database construction processes, knowledge organization, full-text retrieval, index extraction, and data publishing, the library has accumulated expertise. Six librarians have obtained CALIS Level 3 cataloging certificates. The library signed a cooperation agreement with TRS to establish

the “TRS-Northeast Normal University Knowledge Organization and Mining Experimental Center,” integrating enterprise technical strength, library knowledge reserves, and MLIS applied talent cultivation needs to build a practice platform for the joint training base.

3.4.4 Cloud Computing Infrastructure Integrated with Base In September 2011, the US National Institute of Standards and Technology officially released its cloud computing definition. Prior to this, the library began cloud computing infrastructure virtualization research to meet base construction needs, using VMware to virtualize multiple servers on single hosts. In partnership with Ex Libris, it established the “Cloud Services Research and Test Center” to prepare for information technology talent cultivation. From 2011-2014, it adopted Microsoft’s Hyper-V for integrated multi-server applications, enabling virtualization of N high-availability servers as needed. In 2015, it purchased Huawei virtualization software, establishing a distributed storage system through fiber channel switches to achieve efficient server scheduling and on-demand virtual machine deployment. All 85 library application systems migrated to the cloud platform, providing cloud services both on and off campus. The joint training base’s cloud computing experimental platform was simultaneously established, allowing students to apply for server access anytime or conduct various IT experiments under librarian guidance. By the end of 2020, the system was upgraded to VMware ESXi 7, enabling students to learn and apply the latest technologies. The cloud platform IT team comprises 15 members, including one of CADAL’s five IT specialists.

3.4.5 Subject and Academic Research Services Integrated with Base Northeast Normal University Library was among the earliest to establish a Discipline Construction and Academic Research Support Center. Leveraging platforms including the University National Intellectual Property Information Service Center, National Patent Document Service Outlet, Ministry of Education Sci-tech Novelty Search Station, National SME Public Service Demonstration Platform, and CASHL, it conducts intellectual property information research, scientific data research, patent literature research, sci-tech novelty search research, competitive intelligence research, and information literacy education research. This provides knowledge services for discipline development, research project initiation, research cooperation, education evaluation, talent performance evaluation, and patent application and protection. The library has cultivated a professional knowledge service team with multidisciplinary backgrounds and rich experience, including one member with a patent agent qualification certificate, 11 with Ministry of Education sci-tech novelty search auditor certificates, and 25 with Ministry of Education sci-tech novelty search staff certificates, most holding senior professional titles or doctoral degrees. These experts serve as base instructors, guiding student practice and applied research.

Establishing a joint training base for library and information science talent responds to the national strategy of vigorously developing professional degree

education, meets industry demand for high-level applied talent, implements the *Professional Degree Graduate Education Development Plan (2020-2025)*, and represents the library's responsibility. It also opens new career prospects for library staff, stimulates their enthusiasm for business research and professional development, and drives library business transformation and enhanced academic status and university contribution, thereby securing university investment in human, financial, and material resources and benefiting staff in professional evaluations. For the university, it enables coordinated allocation of resources between the library and library and information science discipline, optimizing funding and improving cost-effectiveness. For the discipline, the joint training base provides industry instructors, perfects the applied talent training system, and supports discipline evaluation. For students, it enables direct industry exposure, understanding of industry needs, career planning, and identification of thesis topics from real-world problems, enhancing professional competence. Therefore, establishing an applied talent joint training base between libraries and library and information science programs benefits the nation, university, industry, and individuals.

Joint training base construction requires stakeholder theory guidance [17], sound organizational structures, and robust benefit-balancing mechanisms with effective management systems, measures, and methods to mobilize multi-party participation. As an education platform, the base must be oriented toward talent needs in the transformation and development of the library and information science industry, respect education laws, allocate educational resources scientifically and rationally—especially professional instructors—and create a favorable education environment to guarantee quality improvement and capacity expansion in professional degree graduate education.

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