Postprint: Optimizing Innovation Quality Education for Library, Information and Archive Science Graduate Students to Meet Social Needs

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Abstract

[Purpose/Significance] Against the backdrop of the nation's vigorous implementation of the innovation-driven development strategy, this study investigates and analyzes domestic social demand for innovative talents among graduate students in Library, Information and Archives Management (LIS) from a social demand perspective, aiming to promote the innovation quality education process for LIS graduate students in China, deliver LIS innovative talents to all sectors of society, and contribute to the construction of an innovative country. [Methods/Process] Employing online research, content analysis, combined with questionnaire surveys and interviews, this study analyzes and summarizes the characteristics of social talent demand for LIS graduate students and the current status of innovation quality education and talent cultivation, on the basis of which it elaborates on the deficiencies in domestic innovation quality education for LIS graduate students. [Results/Conclusions] Innovation quality education at the graduate level for Library, Information and Archives Management in China has seen preliminary exploration, but there exists a coordination dilemma between social talent demand for the LIS profession and innovation quality education talent cultivation in universities. Corresponding recommendations are proposed for innovation quality education for graduate students in this major in an innovative society from three aspects: concept-first, subject construction, and resource empowerment.

Full Text

Abstract

[Purpose/Significance] Against the backdrop of China's national innovation-driven development strategy, this study investigates and analyzes the demand

for innovative talents among domestic graduate students in Library, Information, and Archival Science (LIS) from the perspective of social needs. The aim is to advance the innovative quality education process for LIS graduate students in China, deliver innovative LIS talents to various sectors of society, and contribute to the construction of an innovative nation. [**Method/Process**] Using online research, content analysis, questionnaires, and interviews, this paper analyzes and summarizes the characteristics of social talent demand for LIS graduate students and the current state of innovative quality education, based on which it elaborates on the deficiencies in domestic LIS graduate innovative quality education. [**Result/Conclusion**] While preliminary explorations have been made in innovative quality education for LIS graduate students in China, there exists a coordination dilemma between social talent demand for LIS professionals and the cultivation of innovative talents in higher education. This paper proposes corresponding recommendations from three aspects: conceptual prioritization, subject construction, and resource empowerment to optimize innovative quality education for LIS graduate students in an innovative society.

Keywords: innovative quality education; LIS specialty; social demand; talent cultivation; graduate student
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Introduction

With the advent of the knowledge economy era, the importance of innovation has become increasingly prominent, driving development across all sectors of society and serving as the source of sustainable national and ethnic progress. The 18th National Congress of the Communist Party of China deployed the innovation-driven development strategy, and the 19th National Congress once again prioritized innovation. At the 2018 National Education Conference, General Secretary Xi Jinping emphasized the need to "accelerate the construction of world-class universities and disciplines, promote collaborative innovation between industry, academia, and research, and actively participate in implementing the innovation-driven development strategy" [1]. Innovative quality has increasingly become an important standard for measuring the free and comprehensive development of individuals, encompassing both cognitive and practical domains [2]. It includes fundamental abilities (memory, observation, attention, etc.), innovative consciousness (keen foresight, critical thinking, divergent thinking, etc.), innovative capabilities (learning, communication, collaboration, adaptability, practical skills, etc.), and innovative personality (healthy personality traits, correct values, etc.). Innovative quality education, which integrates the cultivation of innovative spirit, capability, and personality into daily teaching activities as its core value orientation, represents an important pathway for cultivating modern talents [3].

As a core component of public affairs management, Library, Information, and Archival Science (hereinafter referred to as "LIS") is a comprehensive discipline

integrating theoretical, practical, and technical dimensions, and should "focus on cultivating innovative, interdisciplinary, and application-oriented talents" [1] to provide effective human resources for the development of the Party and the country's undertakings. This study selected CNKI as the literature source, using search terms including "Library and Information Science innovative talent cultivation," "Archival Science innovative talent cultivation," "Library Science innovative talent cultivation," "Information Science innovative talent cultivation," "LIS talent demand," "Archival Science talent demand," "Library Science talent demand," and "Information Science talent demand" in titles and keywords. The search was conducted on September 16, 2020. After excluding literature with missing keywords and further screening relevant topics, scholars were found to concentrate on discussions of disciplinary innovative talent cultivation models and research on disciplinary talent demand status. Some scholars have pointed out that current libraries and information institutions lack high-level talents, particularly composite talents with innovative thinking [4-5], and that there exists an uncoordinated supply-demand conflict between social needs and LIS education [6], necessitating nationwide professional education planning [7] and development toward cultivating versatile and innovative talents with professional knowledge and comprehensive capabilities [8]. Other scholars specifically noted that current LIS teaching models remain relatively traditional and conservative, with confused educational structural hierarchies [9] and single-origin faculty structures [10], urgently requiring optimized curriculum systems and customized training programs [11]. Some have recognized the importance of transformation in LIS graduate education under new circumstances, focusing on LIS graduate education and high-level talent cultivation, including the connotation of disciplinary innovative talents [12], the necessity of cultivating professional innovative talents [13], functional roles [14-15], status analysis [16], cultivation models [17-19], and optimization paths [20], with some scholars reflecting on teaching links for innovative talent cultivation [21], proposing the promotion of professional innovative talent cultivation through disciplinary competitions [22], and exploring cross-disciplinary experimental teaching reforms [23]. Meanwhile, some scholars have also examined social demand for disciplinary talents, exploring the current status of LIS talent demand [24-26] and investigating disciplinary education [32] and educational reforms [33] based on employment market demand [27], recruitment demand [28-29], and professional demand [30-31], while reflecting on professional education modules such as curriculum design [34] and training objectives. However, research on innovative quality education for LIS disciplines remains scarce, with only a few scholars combining social demand for LIS graduate talents with innovation capability cultivation [35].

Therefore, this study employs online research, content analysis, questionnaires, and interviews to analyze the social talent demand and current state of innovative quality education for LIS graduate students, examine the coordination dilemma between professional social talent demand and university innovative talent cultivation, and propose corresponding recommendations from

three aspects—conceptual prioritization, subject construction, and resource empowerment—to promote multi-dimensional, comprehensive development of innovative quality education for LIS graduate students in China and meet social demand for LIS professionals.

2. Value of Innovative Quality Education in LIS Graduate Education

2.1 Promoting Students' Free and Comprehensive Development

Pestalozzi believed that the purpose of education is not to develop individuals in isolation but to position individuals within the larger chain of humanity, enabling whole-person development. Schools should actively interpret educational values to achieve students' comprehensive and individualized development. Research shows that enterprises particularly favor comprehensively developed LIS talents during recruitment, emphasizing their adaptability, innovative consciousness, thinking, and capabilities [28-29, 33]. This indicates that new social talent demands are driving the transformation of talent cultivation goals, directions, content, and models, requiring timely updates to the cultivation of innovative qualities among LIS graduate students. On the one hand, compared with traditional teaching models, LIS graduate innovative quality education places greater emphasis on students' individualized development, integrating innovative thinking and capability cultivation into teaching practices. It acknowledges, respects, and values student differences and individuality, continuously shaping students' innovative literacy to meet both individual needs and social demands and respond to high-level developmental changes in society. On the other hand, innovative quality education satisfies LIS graduate students' needs for innovative quality development, providing possibilities for their comprehensive development. It possesses the function of cultivating and guiding innovative consciousness, spirit, and capability—abilities to discover new perspectives, ideas, and solutions that benefit students' comprehensive and free development and help them calmly face practical work and unexpected situations [36].

2.2 Enhancing Disciplinary Vitality and Discourse Power

The continuous development of society and the wave of informatization have brought certain impacts to the LIS discipline, with technological changes constantly spawning new things and forcing the discipline to continuously break through, transform, and reshape itself to enhance competitiveness and adapt to ever-changing social demands. The future boundaries, trends, and outlets of LIS discipline development remain in the exploratory stage, and LIS professional education worldwide has embarked on a transformation path. Currently, we must assess the situation and make fundamental choices for LIS education, requiring timely dynamic adjustments and rapid adaptation [37] to strengthen LIS disciplinary belonging, identity, and social discourse power. Graduate education constitutes an important component of LIS disciplinary education, bearing the mis-

sion of facing disciplinary research and practical innovation and cultivating high-level talents adapted to current and future social needs [38]. Innovative quality education has largely become a major breakthrough for LIS disciplinary development positioning, a key factor in solidifying disciplinary status, promoting disciplinary development, and determining its corresponding discourse power, and an inevitable requirement for the discipline to adapt to higher education reform and comprehensively promote quality education. The implementation of innovative quality education can guide and cultivate discipline leaders, builders, and explorers who rapidly adapt to continuous changes, accelerate talent team construction, and continuously promote the stable development of LIS undertakings. In response to social demands and practical changes, LIS graduate innovative quality education represents an adaptive adjustment that helps cultivate innovative quality disciplinary talents with good extensibility, adaptability, and innovation in the new era, enhancing the competitive advantages of the LIS discipline in dynamic environments from multiple angles and aspects.

2.3 Promoting Social Progress and Innovative Development

As the concept of "accelerating the construction of an innovative country" continues to deepen and an innovative social environment of "mass entrepreneurship and innovation" takes shape, innovation is becoming an important driving force for social progress and harmonious development, with innovative quality education assuming the important responsibility of cultivating innovative talents. From the perspectives of libraries, information and archival institutions, various enterprises, finance, commerce, e-commerce, e-government, consulting, communications, and internet institutions, the urgent demand for LIS innovative talents remains prominent, and the contradiction between industry demand for outstanding students and professional education is still significant [39]. As an important force in social public services, social cultural inheritance and innovation, digital resource construction, scientific big data, and many other fields, the LIS discipline is an important component in promoting social progress and innovative development [40]. Therefore, LIS education should be oriented toward social demand for innovative talents, timely adjust talent cultivation goals and methods, break through the limitations of traditional LIS education models, face broader social needs, cultivate LIS talents with high adaptability and resilience, and promote the development of an innovative society. As the primary vehicle for cultivating LIS graduate students' innovative quality and capability, universities should emphasize the transformation of talent cultivation models, grasp the advanced direction of social talent needs, enable the LIS specialty to maintain its professional characteristics and advantages in constantly changing social environments while keeping pace with the times, continuously strengthen the combination of talent cultivation and social development services, and cultivate composite professional innovative talents with comprehensive knowledge structures and LIS disciplinary characteristics to make substantive contributions to society.

3. Current Status of Innovative Quality and Capability Demand in the LIS Industry

3.1 Research Methods and Data Sources

To fully grasp the characteristics of social talent demand for LIS graduate students and conduct more targeted innovative quality education, this study employs online research and content analysis to examine the current social demand for innovative quality capabilities in the LIS industry. To ensure data integrity, authenticity, validity, and scientific rigor, the authors collected and analyzed recruitment information from Zhaopin.com and the "LIS Recruitment" WeChat public account in September 2020, using quantitative methods to compile statistics. Using keywords such as "library science," "archival science," "information science," "library and information science," and "information resource management," the study searched recruitment information from seven representative cities nationwide (including four first-tier cities: Beijing, Shanghai, Guangzhou, and Shenzhen; and three second-tier cities: Chengdu, Fuzhou, and Xi'an), retrieving a total of 259 recruitment postings. Simultaneously, the authors mined recruitment statistics from the "LIS Recruitment" WeChat public account to supplement government and public institution requirements for LIS innovative quality professional capabilities. Zhaopin.com and the "LIS Recruitment" WeChat public account were selected as primary data sources because Zhaopin.com is a widely used employment recruitment website among university students, while the "LIS Recruitment" WeChat public account enjoys high credibility and recognition within the LIS industry and represents the most important and common channel for LIS recruitment and job seeking. Based on this data, the authors employed word frequency statistics to conduct quantitative and qualitative analysis of employers' basic capability requirements in recruitment postings, reflecting current social job responsibilities and capability requirements for LIS graduate talents. These were compared with the connotation of innovative quality to explore innovative quality capability demand in the LIS industry from the employer perspective.

3.2 Analysis of LIS Industry Demand for Innovative Quality Capabilities

LIS innovative quality talents oriented toward social development needs should possess basic social professional capabilities, generally including systematic and open knowledge structures, reasonably innovative thinking modes, healthy and positive personality traits, courageous and rational behavioral practices, and correct and positive value orientations [41], among which learning ability, communication ability, collaboration ability, adaptability, and practical ability are prominent characteristics of innovative talent quality. Through statistical analysis, government and public institution demands for LIS professionals were found to be largely similar, including certain rigid requirements such as good ideological and political quality, meeting specific professional and academic qualifications, and relatively stable demands for professional skills and knowledge

literacy. Generally, candidates must possess LIS disciplinary professional skills and knowledge literacy, be proficient in various office software, and meet other additional conditions such as age limits, Chinese Communist Party membership (hereinafter referred to as "Party membership"), and certain LIS work experience. Overall, there is a tendency to recruit politically qualified LIS talents with strong professional skills and both moral integrity and professional competence, as shown in .

TABLE:1 Basic Capability Demand Statistics for LIS Professionals by Government and Social Organizations

Since enterprise types are diverse, industries vary significantly, and scales differ considerably, most enterprises provide more detailed requirements for LIS professionals' basic capabilities. By statistically analyzing vocabulary related to basic capabilities and conducting word frequency analysis, the results are shown in .

TABLE:2 Word Frequency Analysis of Enterprise Demand for LIS Professionals' Basic Capabilities

As shown in , first, terms related to professional capability, communication and coordination ability, and teamwork ability appear most frequently, with 260, 258, and 223 occurrences respectively. Second, enterprises also place high demands on learning ability, logical ability, and independent problem-solving ability, while copywriting ability and stress resistance appear less frequently, with innovation capability explicitly mentioned only 14 times.

Evidently, from the perspectives of the objective requirements of the continuously transforming information society, the contemporary needs of LIS disciplinary development, and the subjective demands for comprehensive development of innovative talents, government agencies, enterprises, and commercial institutions have increasingly developed recruitment categories toward composite talent demand in recent years. Candidates must not only possess basic conditions such as professional capability but also demonstrate increasing demand and desire for innovative quality professional capabilities. LIS education should adjust its specific talent cultivation goals according to social demand, cultivating innovative talents with solid professional knowledge, high political quality, strong learning ability, and broad adaptability to meet social needs.

4. Current Status of Innovative Quality Cultivation for LIS Graduate Students

4.1 Research Methods and Data Sources

Based on social demand, this study distributed questionnaires to domestic LIS graduate students to investigate the demand for LIS talents and the current status of graduate innovative quality education cultivation in China. The questionnaire comprised 26 objective and subjective questions covering perceptions of

innovative quality education, curriculum design, teacher support behaviors, and innovative teaching environments. Questionnaires were distributed on January 21, 2020, and collected by February 21, 2020, with 151 questionnaires distributed and 148 valid questionnaires recovered. Survey respondents were asked to evaluate the questionnaire carefully based on their own circumstances, with open-ended questions provided at the end for suggestions on LIS graduate innovative quality education. Regarding respondent demographics: library science majors accounted for 18.92%, information science majors for 16.89%, and archival science majors for 64.19%; first-year graduate students comprised 48.65%, second-year 31.08%, third-year 6.76%, and graduated students 13.51%; universities in first-tier cities (Beijing, Shanghai, Guangzhou, Shenzhen) accounted for 57.43%, new first-tier cities (Chengdu, Hangzhou, Chongqing, Wuhan, Suzhou, Xi'an, Tianjin, Nanjing, Zhengzhou, Changsha, Shenyang, Qingdao, Ningbo, Dongguan, Wuxi) for 23.65%, and other cities for 18.92%.

4.2 Survey Analysis of LIS Graduate Innovative Quality Cultivation

4.2.1 LIS Graduate Innovative Quality Education Concepts Remain Somewhat Weak Survey results show that 148 respondents generally recognized the importance of innovative quality for national development and personal future (see). However, regarding whether innovative quality constitutes intellectual performance, 53.37% believed it was highly or relatively consistent, 28.38% were uncertain, and only 18.25% believed it was relatively or highly inconsistent (see).

TABLE:3 Survey Respondents' Perceptions of Innovative Quality's Impact on National and Personal Future Development

TABLE:4 Survey Respondents' Understanding of Innovative Quality Connotation and Their Own Innovative Literacy

These findings indicate that LIS graduate students generally have a clear understanding of the importance of innovative quality but lack accurate self-positioning regarding their own innovative quality, believing it is linked to innate intelligence. This manifests as relatively weak innovative consciousness and spirit compared to others, weaker innovative thinking and knowledge structures, and biased understanding of innovative quality connotation. Currently, LIS professional curriculum teaching tends to be teacher-centered knowledge dissemination, failing to fully achieve the timely transformation of teaching philosophy. This teaching model, focused on cultivating students' professional quality and capability, fails to integrate innovative quality education into the classroom, constraining students' comprehensive development to a certain extent and affecting the formation of students' innovative literacy and the shaping of innovative personality. Additionally, 68.9% of respondents considered their relationship with teachers to be purely "teaching and learning," emphasizing teachers' dominant position while neglecting students' subjectivity. In summary, LIS graduate innovative quality education concepts remain

somewhat weak, with both students and teachers exhibiting certain biases in their understanding of innovative quality education concepts, hindering the cultivation of innovative quality and affecting the effectiveness of innovative quality education implementation. Educational concepts urgently require updating and improvement.

4.2.2 LIS Graduate Innovative Quality Education System Remains Incomplete The second part of the questionnaire addresses the "LIS Professional Innovative Quality Education Curriculum" module, including public elective course settings, professional curriculum settings, and training programs and plans. First, 75.67% of LIS students reported that their graduate curriculum includes public compulsory courses related to innovative quality education, indicating that coverage of such public compulsory courses is at a medium-to-high level, which is commendable. However, 58.11% of students stated that these compulsory courses are highly related to innovation and entrepreneurship, and only 58.78% believed that relevant public compulsory and elective courses were beneficial for cultivating their innovative quality (see). This shows that course content related to innovative quality education is relatively singular, teaching effectiveness has not met student expectations, and course objectives and outcomes have not reached anticipated goals.

TABLE:5 Correlation Between LIS Graduate Innovative Quality Education Public Courses and Innovative Quality Cultivation

Second, regarding whether professional courses involve innovative quality education, the mean scores for systematicness, practicality, and cutting-edge nature of relevant curriculum settings were 3.33, 3.23, and 3.36 respectively (on a five-point scale, see), indicating that student recognition of professional curriculum settings is at a medium-to-high level with considerable room for improvement. Finally, 78.92% of students reported being unclear or not particularly clear about whether innovative capability is incorporated into training programs or plans. To further understand LIS graduate training objectives, the authors visited the official websites of 10 "Double First-Class" universities with top disciplinary rankings and collected relevant information (see). Content analysis revealed that Nankai University, Central China Normal University, Jilin University, Heilongjiang University, and Shanghai University explicitly incorporate innovative capability cultivation into their training programs/plans, demonstrating awareness of the importance of innovative quality education. In summary, there remains a significant gap in the 普及度 (popularization) of LIS graduate innovative quality education, with phenomena of disconnection between innovative quality education and professional education, and incomplete training objectives, systematic curriculum design, and structured teaching forms.

TABLE:6 Systematicness, Practicality, and Cutting-edge Nature of LIS Graduate Professional Curriculum Settings

TABLE:7 Training Plans for Library Science, Information Science, and

4.2.3 LIS Graduate Innovative Quality Education Ecosystem Environment Remains Underdeveloped The innovative ecosystem environment significantly influences the effective implementation of innovative quality education, primarily including teaching environment, faculty, policy support, innovation atmosphere, and other aspects (see). Survey results show that students believe differences in teaching environments such as physical and social environments, urban development levels where universities are located, and university reputation all affect the integrity of the innovative quality education ecosystem. Moreover, faculty is a key factor affecting students' innovative capability cultivation, with teachers' personal innovative consciousness, teaching forms, classroom atmosphere, research activities, curriculum assessment, and student extracurricular consultations all impacting the innovative ecosystem. The mean scores for these factors were 3.78, 4.02, 4.43, 3.07, 4.14, and 2.97 respectively (on a five-point scale), with only teaching forms and curriculum assessment scoring above 4. This indicates that faculty support behaviors for innovative quality education have not yet gained widespread student recognition. Furthermore, only 16.68% of respondents clearly or relatively clearly understood relevant national policies such as innovation and entrepreneurship support policies, suggesting that although the state has issued relevant innovation support policies, they have not been fully implemented for every student, and policy popularization remains inadequate. Regarding professional innovation atmosphere, 16.22% of students believed the atmosphere was very strong, 33.78% believed it was relatively strong, while 50.2% were uncertain or believed it was not particularly strong, indicating that the professional innovation atmosphere has not yet met student expectations. Therefore, current LIS graduate education exhibits insufficient faculty innovative support behaviors, weak student innovative capability and consciousness, and inadequate innovation support atmospheres in schools, departments, and specialties, with national policies not being timely implemented. The innovative quality education ecosystem has not yet formed and urgently requires optimization.

TABLE:8 Influencing Factors of LIS Graduate Innovative Quality Education Ecosystem Environment

5. Optimization Paths for LIS Graduate Innovative Quality Cultivation Based on Social Demand

Cultivating LIS graduate students oriented toward social development needs is a long-term and arduous task closely related to educational concepts, educational systems, and innovative environments. Combining social demand orientation with cultivation status, LIS graduate innovative quality education reform should be promoted from three levels: cultivating innovative quality education concepts, forming innovative quality education systems, and constructing innovative education ecosystems (see [Figure 1: see original paper]).

FIGURE:1 Optimization Path for LIS Graduate Innovative Quality Education Reform

5.1 Conceptual Prioritization: Cultivating Innovative Quality Education Concepts Oriented Toward Social Demand

5.1.1 Scientifically Guiding Students to Form Correct Understanding of Innovative Quality Concepts Kirton's Adaptation-Innovation Theory posits that all individuals possess creativity and problem-solving abilities, with innovators tending to do things differently [42]. Psychology researchers believe that most people's intelligence levels are similar, everyone has innovative potential, and creativity can be cultivated. Therefore, theoretical popularization courses on innovative quality education should be actively developed to scientifically guide students' understanding of innovative quality concepts and correctly comprehend the indicator connotations of innovative quality capability. First, through public elective courses, special lectures, thematic activities, experiential practices, and other forms, hire expert guidance to strengthen students' comprehensive understanding of innovative quality connotation, formation, cultivation, and stimulation. For example, Wuhan University School of Information Management's "Innovation and Entrepreneurship Education Demonstration Base" actively invites off-campus industry experts into the classroom and organizes college student innovation and entrepreneurship education exchange meetings, using existing innovative practice cases and experiences to cultivate talents who love innovation and value practice. Additionally, innovative quality education consultation windows can be established to organize activities related to innovative concept perception, allowing students to strengthen their understanding through hands-on practice. Simultaneously, consultation windows should be open to students to assist and guide them in correctly assessing their own creativity and providing support based on individual circumstances. Second, strengthen guidance during classroom, research, and practice activities to promote improved understanding of innovative quality. The formation of innovative quality cognition requires careful guidance rather than rote indoctrination, and innovative quality capability cultivation is a subtle and timely process of influence generated and improved through continuous innovative demands, stimulating innovative environments, and engaging in innovative learning and activities. Therefore, guidance should be strengthened in multiple environments including classrooms, research, and practice to help students form correct conceptual understanding of innovative quality.

5.1.2 Comprehensively Strengthening Teachers' Guiding Understanding of Innovative Quality Cultivation Teachers' innovative behaviors guide the direction of students' innovative quality capability development and are decisive and irreplaceable in cultivating students' innovative capabilities. Therefore, teachers should timely update teaching concepts, strengthen their own educational innovation, and subsequently guide student innovative education. First, timely update teacher-student relationships and

establish equal, harmonious, and cooperative relationships [43]. LIS graduate students have formed relatively systematic individual cognitive systems and possess relatively independent thinking and practical abilities, enabling them to timely absorb teaching content and feed it back into their own thinking systems. Therefore, teachers should 放下 (set aside) their authoritative status and actively engage in free academic discussions with students, colliding innovative thinking sparks in two-way exchanges. For example, Shanghai University Department of Library, Information and Archival Studies regularly holds roundtable-style academic forums where teachers and students conduct in-depth discussions, interactions, and exchanges around established themes. This healthy teacher-student relationship can create a relaxed and comfortable academic atmosphere where students can freely elaborate viewpoints and accept new ideas, thereby continuously activating innovative thinking and spirit in both teachers and students and facilitating the shaping of two-way innovative capabilities. Second, fully respect individual student differences and provide encouraging education. Due to differences in life backgrounds, learning habits, and personal interests, individual students exhibit varying degrees of reception, thinking, and reflection. Teachers should fully acknowledge and respect individual differences, patiently guide students in teaching, stimulate their innovative desires and motivations, form a new educational concept of "teaching according to aptitude and individuals," and fully exert students' subjective initiative and creativity. Additionally, questionnaire feedback revealed that students' academic motivation and innovative capability development are greatly stimulated when supervisors publicly praise and affirm their academic research activities and achievements. Therefore, teachers should actively create a relaxed, free, democratic, and diverse learning environment, provide students with sufficient respect and trust, and affirm and support students' innovative behaviors.

5.2 Subject Construction: Forming an Innovative Quality Education System Oriented Toward Disciplinary Core

The LIS discipline possesses specific disciplinary connotations and characteristics. Its innovative quality education must follow unique educational teaching laws, inherit core disciplinary knowledge, and formulate scientific plans and methods combined with disciplinary features to form an LIS graduate innovative quality education system oriented toward the disciplinary core (see [Figure 2: see original paper]).

FIGURE:2 LIS Graduate Innovative Quality Education System Oriented Toward Disciplinary Core

5.2.1 Establishing Training Objectives and Plans for Innovative Quality and Personality Cultivation Training objectives are crucial for LIS talent cultivation, determining the construction of training programs and curriculum systems. China's LIS professional education has undergone multiple

reforms and achieved some accomplishments, but the positioning of LIS graduate training objectives remains insufficiently scientific and complete, failing to timely align with gaps in social talent demand [44]. Therefore, training objectives and plans should be scientifically and flexibly formulated to align with social development needs, implementing disciplinary dynamic adjustment mechanisms effectively. First, scientifically determine training objectives according to social demand. Social demand for LIS positions no longer focuses precisely on the major itself but requires professional capabilities and innovative capabilities including learning, adaptability, and adjustment abilities. LIS talent training objectives should keep pace with society, strengthen research on social market talent demand, and position disciplinary training purposes from aspects including ideological and political quality, comprehensive quality, professional capability, scientific knowledge, core competencies, and mental outlook. Reasonable training objectives should be formulated based on specific disciplinary realities, with innovative capability cultivation prominently featured in training programs to create innovative talents that keep pace with social development. Second, reasonably set training plans according to training objectives and orderly conduct practical explorations of teaching reforms, continuously innovating training forms, models, and methods. Training plans guide the entire talent cultivation process and serve as important guidelines for effectively completing the main task of innovative quality and personality cultivation. Therefore, regulations should be made regarding academic system and credits, research directions, curriculum systems, training methods, and graduation requirements, actively exploring disciplinary plans and programs suitable for LIS disciplinary development. By explicitly incorporating innovative quality cultivation into training programs, disciplinary confidence should be boosted under new social demands to cultivate society-suitable innovative talents, thereby enhancing the discipline's influence and penetration in various fields.

5.2.2 Enriching Teaching Structures and Instructional Forms for Innovative Quality Education Classrooms Traditional classroom teaching generally positions teachers as subjects and students as objects, a teaching structure and form that is not conducive to stimulating students' creativity in classroom participation [45]. First, teaching structures for LIS classrooms should be reasonably designed, as effective implementation of innovative quality education cannot be separated from systematic and reasonable innovative teaching structures. On the one hand, implement student course selection and credit systems, granting students more active choice rights, offering more public elective courses related to innovative quality education, enriching students' knowledge structures, and emphasizing quality and general education. On the other hand, use professional courses as carriers to integrate innovative quality education with professional education curriculum systems, forming a complete innovative quality education curriculum system. Second, develop diversified instructional forms with LIS graduate students as the main subjects. Teaching methods such as seminar-style, heuristic, case analysis, and problem-based teaching should be

used to break traditional "teacher-centered" 偏重 (biased) transmission methods and shift toward "teacher-student interactive" open teaching forms [46], effectively stimulating educational subjects' desire for knowledge and cultivating students' innovative quality capabilities. Taking archival management courses as an example, these courses involve both systematic basic theoretical knowledge systems and practical operational skill teaching in archival collection, arrangement, appraisal, preservation, statistics, and utilization. Therefore, instructional models such as group cooperation, scenario teaching, and hands-on practice should be reasonably selected to enable students to comprehensively master archival management methods and skills while effectively cultivating students' independent thinking and critical thinking innovative capabilities through questions and answers and practice. This student-centered teaching structure and instructional form represent the core of cultivating students' independent thinking and innovative capabilities, conducive to strengthening research-oriented talent cultivation and achieving innovation goals [47].

5.2.3 Implementing Student Assessment and Teaching Feedback in the Innovative Quality Education Process Standardized, routine, and institutionalized student quality evaluation and teaching quality feedback are standards for teaching outcomes. Establishing a reasonable evaluation system can promote the stable development of the LIS discipline and serve as a booster for improving innovative quality education effectiveness. First, conduct student assessment and recognition work scientifically. Traditional student assessment and recognition focuses primarily on theses, a relatively singular evaluation method that somewhat suppresses the stimulation of student innovative capability. Graduate student quality is a marker of a school's overall talent cultivation quality and an important indicator of a school's research level and innovative capability. Student quality evaluation involves the entire graduate cultivation process and should include academic papers, research projects, internship projects, practical activities, graduation theses, etc., requiring comprehensive and careful consideration of students' multifaceted performance for scientific quality assessment. For example, most iSchools LIS professional master's graduation requirements do not mandate graduation theses but instead use multiple methods including course credits, graduation theses, comprehensive examinations, professional projects, and internship activities as graduation assessment content [48]. Second, regularly conduct teaching evaluation feedback oriented toward students. Establishing teaching evaluation and feedback aimed at student development can timely identify current difficulties and pain points in LIS innovative quality education implementation, provide timely feedback, follow-up, and supplementation on implementation status, and constitute an essential part of the innovative quality education system. Through questionnaires, interviews, seminars, and other forms, ensure students become the main evaluation subjects, collecting feedback on teachers, curriculum design, departmental systems, and research conditions to guarantee evaluation diversity and effectiveness and obtain comprehensive, profound, and systematic teaching feedback.

Therefore, effectively conducting student assessment and teaching feedback for LIS innovative quality education plays a guiding function in cultivating students' innovative spirit and capability.

5.3 Resource Empowerment: Constructing an Innovative Education Ecology Oriented Toward Innovative Demand

5.3.1 Establishing and Improving LIS Innovative Quality Education Faculty Resources "If creativity is regarded as an educational goal, the prerequisite for its realization is creative teachers" [49]. In teaching activities, innovative quality education refers to teachers enabling students to form stable innovative qualities and spontaneously exhibit innovative behaviors in daily activities through their own innovative teaching. Therefore, creative teachers play a key role in cultivating students' innovative quality. Innovative quality education first relies on teachers' own innovation to promote its improvement. First, encourage teachers' lifelong continuing education to enrich LIS faculty capabilities. Innovative quality education presents broader requirements for faculty construction. Departments should encourage and support teachers to actively participate in technical training and advanced courses to optimize teachers' knowledge structures, quantify existing faculty structure quality, and enable teachers to continuously maintain innovative levels and guidance capabilities. For example, Renmin University School of Information Management provides funding support for teachers to participate in relevant education training, advanced courses, and domestic academic conferences to promote knowledge updates and self-quality improvement [50]. Second, optimize LIS teacher resource allocation and form a diversified LIS faculty team. Establish reasonable mobility mechanisms, scientifically and flexibly allocate teachers according to disciplinary needs, including vigorously introducing high-level talents from domestic and foreign institutions and hiring off-campus practice experts to optimize faculty construction. On the one hand, hire renowned scholars and experts focused on disciplinary frontiers as visiting professors to deliver academic lectures and broaden student horizons. On the other hand, invite frontline workers with rich practical experience as part-time teachers to deliver practical courses, combining professional teaching with actual work. For example, Anhui University has formed a distinctive archival science innovative talent cultivation model—a dual-mentor system combining archival science professional mentors with internship instructors to optimize the faculty team and precisely enhance students' theoretical levels and practical abilities.

5.3.2 Optimizing Innovative Quality Education Teaching and Student Self-Innovation Environment A highly operational society drives subtle changes in industry work environments, requiring talents to possess high foresight and strong adaptability, and necessitating comprehensive qualities and innovative thinking to ensure innovative and sustainable development in industry fields. First, strengthen on-campus innovative culture construction and actively optimize educational environments that stimulate innovative desire. On

the one hand, strengthen the creation of campus innovative culture, including advocating respect for academia and equal competition, and encouraging and supporting student participation in innovative practice activities. On the other hand, schools and colleges should actively establish systematic and comprehensive regulations and guarantee mechanisms for innovative talent cultivation, providing space, technology, funding, and guidance support for student innovative activities. For example, Renmin University School of Information Management has established Web development laboratories, experimental archives, and digital humanities technology laboratories to help LIS discipline innovators solve practical difficulties in innovative activities and strive to create an atmosphere for implementing innovative quality education. Second, collaboratively construct LIS practice education bases. The LIS discipline possesses strong practical characteristics [51], emphasizing practice orientation in disciplinary system and capability construction. Relevant departments such as archives, government agencies, public institutions, and enterprises can collaboratively establish education bases to build innovative talent cultivation platforms in the LIS discipline field, more targeted cultivation of LIS discipline talents, and effectively stimulate student creativity. For example, Fujian Normal University Archival Science specialty has established long-term collaborative education bases with provincial archives and university archives, enhancing archival science students' professional vision, innovative consciousness, and innovative capability through thematic lectures, visits, and hands-on practice. Finally, rely on innovative activity platforms to organize and conduct innovative LIS discipline research and activities. Academic competitions and research activities are effective means to stimulate student academic interest, conducive to improving student research capability and cultivating innovative spirit. Examples include the National College Archival Science Student Extracurricular Science and Technology Works Competition, Shanghai Library Open Data Competition, and the "Challenge Cup" National College Student Extracurricular Academic Science and Technology Works Competition.

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Zhou Linxing: Guided paper topic selection, proposed research direction and basic framework, guided and revised the paper;
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Analysis on Innovative Quality Education of Library-Information-Archival Science Graduate Students Based on Social Needs

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Abstract: [Purpose/significance] Under the background of implementing the national innovation-driven development strategy, this paper investigates and analyzes the demand for innovative talents of library-information-archival science graduate students in China from the perspective of social needs, aiming to promote the process of innovative quality education for library-information-archival science graduate students in China, deliver innovative talents to all walks of life, and contribute to the construction of an innovative country. [Method/process] Using online survey, content analysis, questionnaire survey and interview, this paper analyzes and summarizes the characteristics of social talent demand for library-information-archival science graduate students and the current situation of innovative quality education, and expounds the deficiencies of innovative quality education for library-information-archival science graduate students in China. [Result/conclusion] There has been preliminary exploration of innovative quality education for graduate students majoring in library-information-archival science in China, but there is a dilemma of incoordination between social talent demand and innovative quality education in universities. This paper puts forward corresponding suggestions from three aspects: concept first, subject construction and resource empowerment, in order to promote the multi-dimensional and full-coverage development of innovative quality education for library-information-archival science graduate students in China, meet the social demand for library-information-archival science graduate students, and contribute to the construction of an innovative country.

Keywords: innovative quality education; library-information-archival science; social needs; talent training; graduate student

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