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Status and Reflections on Information Literacy Education for International Students in University Libraries: Postprint

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Abstract

[Purpose/Significance] This study investigates the practical progress of information literacy education for international students in university libraries in China, proposes feasible development strategies, and provides references for university libraries to develop information literacy education for international students that supports the university's "Double First-Class" strategy and internationalization construction. [Method/Process] A questionnaire survey was conducted among 104 librarians from 91 universities offering international student education across five regions (east, west, south, north, and central) in China, as well as 20 international students from Shanghai Jiao Tong University. The survey results were analyzed to identify the strengths, weaknesses, and coping strategies in information literacy education for international students in Chinese university libraries. [Results/Conclusion] More than half of university libraries in China have implemented information literacy education for international students. Related teaching practices exhibit characteristics such as diversified teaching personnel and faculty, multi-dimensional teaching types and content, and diversified teaching methods and languages. However, problems exist including insufficient attention to the cultivation of information literacy among international students, teaching practices needing strengthening, a serious shortage of teaching personnel, and teaching effects requiring improvement. These issues can be addressed through strategies such as strengthening the planning and design of information literacy education for international students, consolidating faculty team construction, focusing on improving librarians' teaching capabilities, and enhancing the application of new teaching methods.

Full Text

Current Status and Reflections on Information Literacy Education for International Students in University Libraries

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Abstract

[Purpose/Significance] This study investigates the practical progress of information literacy education for international students in Chinese university libraries, proposes feasible development strategies, and provides references for libraries to implement such education in support of the “Double First-Class” strategy and internationalization initiatives. **[Method/Process]** Questionnaire surveys were administered to 104 librarians from 91 universities across eastern, western, southern, northern, and central China that enroll international students, as well as 20 international students at Shanghai Jiao Tong University. The survey results were analyzed to identify strengths, weaknesses, and response strategies for information literacy education targeting international students. **[Result/Conclusion]** More than half of Chinese university libraries have implemented information literacy education for international students, characterized by diversified teaching staff, multi-dimensional teaching types and content, and varied teaching methods and languages. However, several deficiencies exist: insufficient emphasis on cultivating international students’ information literacy, inadequate teaching practices, severe shortage of qualified instructors, and suboptimal teaching effectiveness. These issues can be addressed through strengthening top-level design, building teaching capacity, enhancing librarians’ pedagogical skills, and adopting innovative teaching methods.

Keywords: university libraries; information literacy education for international students; practice status; development countermeasures

Introduction

To enhance the comprehensive strength and international competitiveness of higher education, China has made the major strategic decision to build world-class universities and first-class disciplines (the “Double First-Class” initiative). In 2015, the State Council issued the “Overall Plan for Promoting the Construction of World-Class Universities and First-Class Disciplines,” which called for creating a favorable international teaching environment, attracting high-caliber international students, and improving the international competitiveness of Chinese higher education [?]. In 2018, the Ministry of Education issued the “Guiding Opinions on Accelerating the Construction of ‘Double First-Class’ in Higher Education Institutions,” emphasizing the need to further improve the institutional system for recruiting, cultivating, managing, and serving international

students while intensifying efforts to cultivate international talent [?]. Under the guidance of these “Double First-Class” strategies, the number of international students in Chinese universities has grown steadily. In 2018, nearly 500,000 international students from 196 countries and regions studied at over 1,000 (38%) higher education institutions in 31 provinces, autonomous regions, and municipalities across China, making China the largest destination for international students in Asia [?]. International student education is a key component of university internationalization and the “Double First-Class” strategy. Continuously improving the quality of international student cultivation contributes to fostering international scientific and technological innovation talent, enhancing universities’ international influence and competitiveness [?], and promoting the realization of world-class university and discipline goals [?].

In the context of the “Double First-Class” strategy, university libraries serve as crucial support units for teaching and learning, with international students becoming an increasingly significant user group that cannot be overlooked. Consequently, information literacy education for international students has become an essential service. Actively developing such education to support international student cultivation and international talent development benefits global talent training and enhances international influence, highlighting the library’s unique value and role in advancing university internationalization and the “Double First-Class” strategy. However, information literacy education for international students presents particular challenges and complexities regarding target audiences and instructional languages. Compared with domestic student-oriented information literacy education, substantial gaps exist in both practical exploration and theoretical research, which is inconsistent with China’s globalization trends and “Double First-Class” strategy. Therefore, conducting a nationwide survey on information literacy education for international students, analyzing the current characteristics and shortcomings of such education in Chinese university libraries, and considering improvement methods and enhancement strategies are crucial for the long-term development of these programs and the advancement of internationalization strategies.

1. Research on Information Literacy Education for International Students in University Libraries

Scholars both domestically and internationally have conducted extensive research on this topic. Domestic studies began in the 1990s, with Ning Yanmei et al. discussing how university libraries could provide retrieval skills training for international student readers in 1994 [?]. Subsequent research has gradually increased. Some researchers have identified problems and proposed improvements based on needs surveys. For instance, Li Dejuan surveyed 100 international students at Beijing Jiaotong University and recommended designing tailored teaching content, improving textbooks, and refining teaching methods [?]. Deng Ling et al. investigated the information literacy status of international students at

Guangxi Medical University and considered enhancement measures [?]. Others have summarized theoretical and practical experiences. Zeng Guoguo summarized the overall planning of English-language information literacy courses for international students at Southwest Medical University and its multi-level, phased education plan [?]. Li Guifang discussed teaching reform practices for master's and doctoral international students at Anhui Medical University and offered suggestions for addressing challenges [?]. Some scholars have examined this topic within the “Double First-Class” context. Xu Chun et al. noted that information literacy education in university libraries should prioritize online instruction, embedded information literacy education, and programs for international students [?].

International research on this topic began earlier, dating back to the late 1960s. In 1969, S. Wright et al. studied the information literacy needs and behaviors of graduate students, including international students [?]. Subsequent research has continued to grow. Some scholars have elaborated on theoretical considerations and practical experiences. N. Sánchez-Tarragó et al. analyzed library services supporting university internationalization, including information literacy education for international students [?]. S. Nowrin et al. discussed successful practices in multilingual and multicultural environments [?]. J. Toner introduced library services supporting international students at the University of Chester and explored strategies for improving their information literacy [?]. Other scholars have studied innovative teaching methods. H. Hughes et al. examined flipped classroom approaches for international student library orientation [?], while A. Sample analyzed the use of augmented and virtual reality to reduce library anxiety among non-traditional and international students [?].

In summary, while scholars have conducted numerous theoretical and practical studies on information literacy education for international students, research on the overall status, characteristics, existing problems, and development strategies across Chinese university libraries remains insufficient, particularly within the “Double First-Class” context. This study addresses this gap through multi-dimensional data analysis based on a nationwide survey.

2. Survey Design and Implementation

To design a scientifically sound questionnaire that comprehensively reflects the current practice of information literacy education for international students in Chinese university libraries, the researchers established three objectives: (1) understand and analyze librarians' perceptions regarding the necessity, investment, and development prospects of such education; (2) examine the demand and practical progress, analyzing characteristics and deficiencies; and (3) propose improvement recommendations based on identified issues. The researchers reviewed relevant literature on questionnaire-based studies, including Luo Yehong's survey of Chinese international students' information literacy preferences

[?], H. Julien et al.'s survey of information literacy instructional practices among US academic librarians [?], and N. Aharony et al.'s survey of instructional methods in Israeli university libraries [?].

Based on these references, the researchers designed a questionnaire covering four aspects: librarians' cognition, attitudes, and evaluations; demand conditions; practical implementation (frequency, coverage, participation, methods, languages, instructor composition, teaching methods, content, and effectiveness); and perspectives on future challenges and optimism.

To ensure comprehensive coverage, the survey targeted 91 universities across China's five regions that enroll international students. The selection followed two principles: (1) include all 42 world-class universities designated by the Ministry of Education in 2017, as they represent high standards and serve as models; and (2) maximize coverage of various university types across all regions to ensure generalizability. The survey was administered via Wenjuanxing platform from April 2019 to April 2020, inviting 104 relevant librarians through QQ, WeChat, and email. Among respondents, 30 librarians (71%) were from 30 world-class universities, 50 librarians (50%) from 44 national key universities, and 54 librarians from 47 ordinary institutions. Geographic distribution included 39 universities (43%) in northern China, 25 (27%) in eastern, 12 (13%) in western, 9 (10%) in central, and 6 (7%) in southern regions. All 104 responses were valid (100% response rate).

To reflect international students' perspectives, a preliminary survey (Questionnaire 1) was conducted in December 2018 among 20 international students at Shanghai Jiao Tong University, examining their information retrieval methods, content needs, and teaching method preferences. All 20 responses were valid.

3. Current Status of Information Literacy Education for International Students in University Libraries

3.1 Characteristics of Information Literacy Education for International Students Survey results reveal several characteristics in teaching practice, instructor composition, content design, and teaching methods.

3.1.1 Teaching Practice Implemented in Over Half of University Libraries

Information literacy education for international students has achieved semi-universal coverage. Despite challenges such as limited English-speaking staff, internationalized teaching methods, and content design difficulties (see Figure 1 [Figure 1: see original paper]), nearly half of surveyed libraries have actively responded to user needs. Libraries employed multiple channels to understand needs, including faculty liaison (35 librarians, 34%), proactive departmental outreach (27, 26%), and faculty visits (13, 13%). Results show that 47 libraries

(52% of 91 respondents) have implemented relevant training, including 20 world-class university libraries (67% of participating world-class institutions). This partially meets international students' information literacy needs.

3.1.2 Diversified Teaching Staff

Instructor composition is notably diverse. Most librarians (75, 72%) identified lack of English-speaking instructors as the primary challenge, making faculty shortage the biggest bottleneck. In response, libraries have mobilized both internal and external resources. Internally, they have formed cross-departmental teams comprising information literacy group members (31, 30%), English-proficient librarians (28, 27%), those with English academic backgrounds (20, 20%), overseas-educated librarians (20, 20%), younger librarians (10, 10%), and medical library science specialists (2, 2%) (see Figure 2 [Figure 2: see original paper]). Externally, some libraries have recruited international student assistants (1, 1%) and invited foreign faculty (1, 1%) to teach academic writing, providing additional support.

3.1.3 Multi-dimensional Teaching Types and Content

Teaching types and content show multi-dimensional development. While still in its early stages, the field has explored diverse formats. Teaching types include new student orientation (30, 29%), thematic training (25, 24%), course-embedded instruction (9, 9%), and credit-bearing courses (23, 22%) (see Figure 3 [Figure 3: see original paper]). Content covers comprehensive information literacy topics: library resource retrieval methods (59, 57%), library resources and services introduction (58, 56%), internet resource retrieval (41, 40%), academic resource evaluation (26, 25%), research software like EndNote (16, 15%), academic ethics (19, 18%), academic writing and publishing (15, 14%), and research frontier tracking (8, 8%) (see Figure 4 [Figure 4: see original paper]).

3.1.4 Diversified Teaching Methods and Languages

Teaching methods and languages are notably varied. While most libraries (44, 86% of 51 implementing institutions) still use traditional lecture-based instruction, some have adopted Rain Classroom (9, 18%), flipped classrooms (8, 16%), micro-lectures (4, 8%), MOOCs (1, 2%), and other methods like problem-based, case-based, and seminar-style teaching (18%). Linguistically, most libraries (35, 69%) use English-only instruction, some use Chinese-English bilingual (7, 14%) or German (1, 2%), while others use Chinese for Asian students from countries like Korea (18, 35%), meeting diverse language needs.

3.2 Shortcomings in Information Literacy Education for International Students

Despite progress, several problems persist:

3.2.1 Insufficient Attention to International Student Information Literacy Education

While all libraries recognize the necessity of such education, over half (57, 55%)

do not prioritize it adequately. Although all agree on its importance, implementation lacks sufficient attention, investment, and resources. Under the “Double First-Class” strategy, libraries should emphasize international student information literacy education to enhance students’ capabilities and demonstrate the library’s irreplaceable value in supporting university internationalization.

3.2.2 Inadequate Teaching Practice

Implementation remains weak across multiple dimensions. Nearly half (48%) of libraries have not yet launched such programs. Among those that have, frequency is low: 47% (24 of 51) conduct fewer than two sessions per semester. Coverage is limited: 51% (26) serve only 1-2 departments. Participation is modest: 59% (30) have fewer than 100 participants annually (including domestic students). According to the student survey (Questionnaire 1), 75% (15 of 20) reported rarely or never attending library information literacy training. Even among world-class universities, libraries average only about four sessions annually with 100-200 participants across approximately four departments—modest scale relative to enrollment. For example, Shanghai Jiao Tong University hosted 7,223 international students across 19 English-taught departments in 2018 [?]. Meanwhile, 78% (81) of librarians rated their international students’ information literacy as poor or very poor, and while all 20 surveyed students recognized the need for such education, only 35% (7) could effectively retrieve library resources.

3.2.3 Severe Shortage of Qualified Instructors

The lack of English-speaking instructors is the most significant constraint. As noted, 72% of libraries report this deficiency, including 73% (22 of 30) of world-class university libraries. Faculty shortage is a universal problem requiring multi-pronged solutions to ensure sustainable program development.

3.2.4 Suboptimal Teaching Effectiveness

Overall teaching effectiveness needs improvement. Half (26, 50%) of libraries with existing programs rated their effectiveness as poor or very poor, primarily due to outdated methods and insufficient instructor capabilities. Over 86% (44 of 51) rely on traditional lecture-based teaching, while 40% (36 of 91) acknowledge inadequate instructor competence. Teaching methods and instructor capability significantly impact effectiveness; libraries must adopt innovative approaches and enhance bilingual/English teaching skills to improve outcomes.

4. Development Countermeasures for Information Literacy Education for International Students

To address these challenges, Chinese university libraries should implement comprehensive measures:

4.1 Strengthen Top-Level Design

International student education is vital for university internationalization and the “Double First-Class” strategy. Libraries should: (1) shift from passive to proactive service, actively promoting programs and understanding needs rather than waiting for requests; (2) systematically analyze teaching needs through departmental liaison, faculty visits, and surveys to understand user types and content requirements; and (3) develop customized service menus with tiered, categorized modules covering library resources, literature retrieval, research frontier tracking, software tools, and academic ethics.

4.2 Build Teaching Capacity

Libraries must cultivate English-teaching talent through multiple channels: (1) tap internal potential by establishing foreign-language information literacy teams comprising librarians with foreign language backgrounds, overseas experience, or strong English skills; (2) recruit student assistants with strong English proficiency (international or domestic students) to support translation, consultation, and grading; (3) collaborate with international programs and foreign language colleges to invite faculty to teach specialized topics; and (4) utilize modern communication tools (WeChat, QQ, email groups) to establish peer-learning platforms supplemented by librarian support [?].

4.3 Enhance Librarians’ Teaching Abilities

Improving foreign-language instruction capabilities is fundamental: (1) strengthen oral English skills through regular exposure to foreign library websites, periodicals, and media to master professional terminology; (2) prepare thoroughly by analyzing student needs, customizing materials, scripting lectures, rehearsing, conducting trial lectures, and anticipating student questions; and (3) design engaging classes with interactive elements, discussions, and pre-class assignments suited to international students’ more active classroom participation styles.

4.4 Adopt Innovative Teaching Methods

New teaching methods should be integrated into international students’ learning environments to exponentially improve effectiveness. Since 80% (16 of 20) of surveyed students prefer alternatives to lecture-only formats and 70% (14) favor micro-videos and flipped classrooms, libraries should leverage technology: use livestreaming and recorded videos for orientation to maximize reach; develop thematic micro-lectures for flexible learning; and implement flipped classrooms and Rain Classroom for credit-bearing and embedded courses.

As the “Double First-Class” strategy advances, internationalization has become essential for building world-class universities [?]. The Ministry of Education’s 2018 “Quality Standards for International Student Higher Education in China (Trial)” emphasizes improving education quality [?], making international students a key library user group. While Chinese university libraries have made initial progress in faculty development, content exploration, and method innovation, deficiencies remain in attention, practice depth, staffing, and effectiveness.

Future efforts must focus on strategic planning, capacity building, instructor development, and innovative methods to support international talent cultivation and the “Double First-Class” strategy.

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Author Contributions

Huang Qinling: Responsible for paper writing and revision.

Tan Min: Responsible for overall concept and framework design.

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