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The Current Status and Implications of Curriculum Services in Academic Libraries: A Postprint Based on a Survey of 38 World-Class Universities

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Abstract

[Purpose/Significance] This study investigates the current status of course services in world-class university libraries, explores their reference value for course services in Chinese university libraries, and aims to enhance the capacity of Chinese university libraries to support the educational development of world-class universities. [Method/Process] The study selected 38 world-class university libraries and employed web-based investigation methods to research the current status of course services from the perspectives of service content, service models, and service platforms. [Results/Conclusion] The survey results indicate that the main course services provided by world-class university libraries include electronic course reserve services, course guide services, and course management system services, primarily supported by information technology environments such as electronic reserve platforms, course guide platforms, and course management systems. It is recommended that Chinese university libraries prioritize course services as a forerunner to subject services and strengthen the connotative development of course services.

Full Text

Preamble

The Current Situation and Enlightenment of Course Service in University Libraries: An Empirical Study of 38 World-Class Higher Education Institutions

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Abstract:

[Purpose/Significance] This study examines the current state of course services in libraries of world-class universities to identify their reference value for Chinese university libraries, thereby enhancing their capacity to support world-class university education and construction. [Method/Process] We selected 38 libraries from world-class universities and conducted a web-based investigation focusing on service content, models, and platforms. [Result/Conclusion] The findings indicate that course services in world-class university libraries primarily consist of electronic course reserve services, course guide services, and course management system services, supported mainly by electronic reserve platforms, course guide platforms, and course management systems. We recommend that Chinese university libraries prioritize course services as a precursor to subject services and strengthen their connotative development.

Keywords: course service; subject service; teaching support service; information literacy education; maker course

1. Research Status of Course Services in Domestic and International University Libraries

Course service as a distinct concept in university library science was first explicitly proposed in 2011. Professor Chu Jingli noted that “course service is included in the services of Stanford University’s Engineering Library” [1], while Professor Zhu Qiang observed that “in terms of course services, Harvard Business School Library has done extensive work for almost every course in the business school” [2]. Zhu Qiang defined course service as “characteristic services provided around course teaching and learning,” categorizing it into basic course services and in-depth services that track the entire course lifecycle [3].

Beginning in 2012, domestic scholars advocated for the implementation of course services in Chinese university libraries. Research Librarian Liu Wanguo from Northeast Normal University Library explicitly proposed at the “2012 Chinese University Library Development Forum and Advanced Seminar on Digital Library Frontier Issues” that “librarians should use information technology to provide course services and help teachers with discipline construction” [4]. In 2013, Yan Na from Tianjin University of Finance and Economics Library, based on an analysis of ten major development trends in American university libraries, suggested that “domestic university libraries could consider integrating into the teaching environment to provide in-depth course services” [5].

1.1 Domestic Research Status

In recent years, some Chinese university libraries have undertaken practical research on course services. Beijing Technology and Business University Library launched course services targeting key university courses, initially establishing

course guides for majors and public courses in the Food Science and Foreign Languages schools, including up-to-date information on teaching content, collection and preservation of course textbooks, supplementary materials, and audio-visual resources, as well as providing full-cycle tracking services [6]. Shanghai Institute of Visual Arts Library constructed a course-centered learning platform based on high-quality domestic and international teaching resources related to courses and library information resources, relying on its Learning Resources Center to provide course services and teaching resource repositories [7]. Shanghai Jiao Tong University Library published course guides for the “Renewable Energy” freshman seminar through LibGuides, with students conducting content construction under the guidance of subject librarians [8], and also launched mobile learning-based embedded subject services for the teaching processes of two undergraduate 精品 courses—“Combustion” and “Manufacturing Technology”—relying on Pad mobile learning terminals, wireless network environments, various software technologies, and related network platforms [9]. Northeast Normal University Library’s subject librarians have practiced course services through resource push services, auxiliary course construction services, course teaching reform services, and MOOC services supporting student autonomous learning via the Blackboard course management system [10], and more recently have conducted educational technology training for teachers building online courses and embedded information literacy education. Chongqing University Library has implemented embedded course services focusing on course resource services and course knowledge services [11]. However, a gap remains between Chinese university libraries’ course services and those of world-class university libraries. Chinese university libraries still need to transform and innovate teaching support services [12], improve the course librarian service system, enhance course librarians’ capacity to serve teaching [13], and play important roles in course construction decision-making, course information consulting, introduction and exchange of cutting-edge courses domestically and internationally, and embedded course services [14].

1.2 International Research Status

North American university libraries have pioneered service practices and research around course teaching. Princeton University Library has established a Reserves Department where course librarians provide a series of course services including literature collection, electronic resource development, and knowledge services [15]. Dartmouth College Library [16] and Ohio University Library [17] provide course resources to readers through Course Guides. Carleton University Library in Canada embeds its course guides pages into its Course Management System (CMS) [18]. Research shows that course guides embedded in CMS can enhance college student learning outcomes [19].

Harvard Business School Library adopts a course assistance model, collecting course textbooks, supplementary materials, and audio-visual resources, providing up-to-date information based on teaching content, and offering assistance

to teachers in educational technology and information technology applications [2]. Collaborating with teaching faculty on course design has become a new development opportunity for university librarians [20]. MIT Library and Cornell University Library use course resource management software to build their own electronic reserve systems to provide course services [21]. The College of Staten Island Library at CUNY [22] and the Meriam Library at UC Berkeley [23] have both integrated library resources, linked resources, or information literacy education and other course-related resources into course management systems to strengthen traditional library instruction.

Although the aforementioned domestic and international studies have laid a foundation for understanding course services in university libraries, these studies focus on introducing specific cases and emphasize micro-level approaches and content. They have not yet investigated and analyzed the conceptual frameworks, methodologies, and content of course services in world-class university libraries from a meso perspective, nor have they fully revealed the development status, approaches, trajectories, and trends of course services. They have not conducted systematic summarization, generalization, and organic organization of course services. Consequently, the insights derived for building world-class university libraries and promoting their academic value remain somewhat limited. Therefore, this study attempts to comprehensively survey literature and websites to fully outline and analyze the current status and trends of course services in world-class university libraries, discuss their implications for Chinese university libraries, and propose corresponding strategies.

2. Investigation and Analysis of Course Services in World-Class University Libraries

World-class universities typically refer to research universities with strong disciplinary strength, renowned academic masters, global prestige, and top world rankings. Currently, the most recognized world university rankings include the Times Higher Education (THE) World University Rankings, the QS World University Rankings, and the U.S. News & World Report Best Global Universities Rankings. Given that teaching and learning environment carries significant weight in THE evaluation criteria, showing higher alignment with teaching support services, this study selected THE World University Rankings as the criterion for world-class universities.

2.1 Website Survey and Overall Analysis

The study listed the top 60 universities in THE rankings as preliminary survey objects and conducted web-based investigations of their libraries. It found that 38 university libraries offered course services, accounting for 63.3% of the total surveyed. These 38 libraries were then investigated in depth from February 1 to May 15, 2019. Based on the analysis, course service contents were categorized into three types: Course Reserves Services (CRS), Course Guides Services

(CGS), and Course Management System Services (CMSS). The course service offerings of the 38 world-class university libraries are shown in Table 1 .

Analysis of Table 1 reveals that among the 38 libraries offering course services, 29 are in the United States (76.3%), followed by China and Canada with three each (7.9% each), and the United Kingdom, Australia, and Singapore with one each. This indicates that course services are best developed in North America, with over 84.2% of the total, followed by Asia (10.5%), while European world-class universities offer course services less frequently. In terms of service richness, libraries at Harvard, Yale, Duke, University of British Columbia, McGill, and Brown provide relatively comprehensive course services, achieving full coverage of all three service categories.

In terms of service prevalence, 34 libraries (89.5%) offer course reserves services, ranking first; 18 libraries (47.4%) offer course guides services, ranking second; and 15 libraries (39.5%) offer course management system services, ranking third. The study found that all libraries offering course guides services also offer course reserves services, except for Stanford University Library.

2.2 Analysis of Course Reserves Services

The survey found that course reserves services have become the primary component of course services. Among the 34 libraries offering this service, 22 rely on Course Reserves Platforms (CRP) as their technical environment, while the remaining 12 rely on library websites. The 22 libraries using CRP and their information technology environments are shown in Table 2 .

Table 2 shows that: (1) CRP has become the main technical environment for course reserves services in university libraries, accounting for 64.7%; (2) 16 libraries (72.7%) use commercial CRP, making commercial platforms the preferred choice compared to open-source or self-developed platforms; (3) Among commercial CRPs, Blackboard is the most widely used, with five libraries (31.3% of commercial software), which exceeds 43.8% if considering Blackboard's 2005 acquisition of WebCT; (4) 17 libraries (77.3%) use course management systems such as Blackboard, Sakai, Canvas, and Moodle as their CRP, making course management systems the mainstream choice for reserves platforms in foreign university libraries.

2.3 Analysis of Course Guides Services

Course guides services have become a typical component of university library course services. Regarding technical environments, all libraries use Course Guides Platforms (CGP). Analysis of the countries where these libraries are located shows that 16 are in the United States, and one each in China and Singapore. The 18 libraries using CGP and their information technology environments are shown in Table 3 .

Table 3 reveals that: (1) 14 libraries (77.8%) use Subject Guides Systems (SGS)

as their CGP, making SGS the mainstream technical choice; (2) Within SGS, LibGuides is the sole platform and has become an indispensable technical environment for course guides services; (3) Course guides services have become the general trend in teaching support services at world-class university libraries.

The survey found that course guides based on LibGuides provide richer and more specific course service content, including course resources, information literacy, and academic writing, compared to homepage-integrated platforms that typically only direct readers to subject librarians' personal pages or contact information. Course guides require greater investment of human and material resources in guide construction and more refined resource classification and organization. According to statistics from American university librarians, guides designed for specific courses are used significantly more than comprehensive subject guides. To meet student learning needs, librarians must shift from traditionally organizing library resources by subject category to organizing them by course [62]. This demonstrates that course-level learning resources provided by course guides can more precisely meet student learning and research needs than the larger-grained learning resources of subject guides.

2.4 Analysis of Course Management System Services

The survey found that course management system services can be summarized into three aspects: CMS information technology support services, resource services integrated with CMS courses, and information literacy education embedded in CMS courses. Traditionally, technical support for university course management systems has been the responsibility of educational technology centers or information technology centers. However, the survey found that eight world-class university libraries, including Stanford, Harvard, and Yale, directly provide course management system educational technology support services and have established comprehensive CMS support systems and teams. Six university libraries, including Karolinska Institutet and Duke, have launched resource services embedded in specific CMS courses, while two libraries—University of Wisconsin-Madison and University of British Columbia—have implemented information literacy education embedded in specific CMS courses. The 15 libraries offering course management system services and their information technology environments are shown in Table 4 .

Table 4 shows that: (1) Eight libraries (21.1% of the 38 offering course services) provide CMS information technology support services, which have become an emerging teaching service content in world-class university libraries. Notably, this service has traditionally been provided by educational technology or IT centers, indicating that world-class university libraries have gradually become important supporters of technology-enabled education; (2) CMS information technology support services primarily target Blackboard and Canvas; (3) Only Karolinska Institutet Library among the 15 offers two types of services, indicating that CMS services represent a new growth point for course services while also showing that developing CMS services remains a significant challenge; (4)

Providing resource integration services and embedded information literacy education through CMS represents a new trend in resource services and information literacy education in university libraries.

The survey found that eight libraries, including Harvard, Princeton, Yale, UCLA, Duke, University of British Columbia, UC Santa Barbara, and NYU, use CMS as CRS during course service implementation. For example, Harvard uses Canvas as both CMS and CRS, effectively integrating course reserves resources into CMS to improve usage efficiency. Harvard, Duke, University of British Columbia, and McGill organically integrate CMS and CGS. Duke, for instance, embeds LibGuides course guides for specific courses into corresponding Sakai CMS courses to improve the usability of course resources and library services. Harvard, Duke, and University of British Columbia share a common characteristic: they simultaneously integrate all three technology platforms—CMS, CRS, and CGS—making them typical representatives of information technology-assisted course services in university libraries.

In summary, the following conclusions can be drawn: (1) CRP, CGP, and CMS are the main technical environments for course services in world-class university libraries; (2) Comprehensively using these three technical environments to build a Course Service Environment (CSE) represents a development trend; (3) Using course management systems as course reserves platforms effectively enhances the integration between library resource services and university course teaching; (4) Twenty-two libraries (57.9% of the 38 offering course services) provide two or more types of services, indicating that offering both course services via technical environments and support services for those environments is an important trend in world-class university libraries.

3. Recommendations for Chinese University Libraries

3.1 Taking Course Service as the Precursor to Subject Service

In developing subject services, Chinese university libraries should vigorously implement course services—including course reserves services, course guides services, course management system services, and other teaching support services—targeting faculty and student teaching. They should position course services as the vanguard of subject services, 统领 course services with a 精品意识 and 统领 subject services with a 示范意识, ensuring that course services produce 精品 while subject services create 示范. Course services should drive broader initiatives, while subject services combine specific and general approaches. This strategy leverages the precise positioning and meticulous attention of course services while capitalizing on the broad coverage and connecting functions of subject services, thereby achieving balanced support for both teaching and research and establishing the library as an important pillar for talent cultivation and connotative development in world-class universities.

3.3 Constructing an Integrated Platform for Course Teaching Resources and Services

Chinese university libraries should actively explore a 3C course service model that integrates Course Resources Platforms (CREP), Course Management Systems, and Course Services Platforms. They should research and develop an integrated 3C platform for course resources and services, actively explore cloud storage-based teaching resource construction and service models, and build a library subject service portal that integrates functions such as teaching resource storage, course teaching resource recommendation, course service navigation, and course learning management, integrating it with the library portal in an information technology environment.

3.4 Strengthening Connotative Construction of Course Services

In resource construction, libraries should shift from building loosely organized discipline-general resources to building intensive course-specific resources, strengthening both independent construction and commercial procurement of course-level resources while enhancing refined resource organization and scientific correlation. In talent cultivation, they should strengthen training in teaching capabilities and educational cognition, introducing pedagogy and psychology content to transform from training single-business-type (multi-discipline, single-capability) subject librarians to multi-business-type (single-discipline, multi-capability) subject librarians. In service content, they should shift from relying on third-party educational technology institutions for CMS assistance to independently providing one-stop course management system services including course information technology support. In service objectives, they should shift from serving undergraduates to cultivating them, particularly for normal university libraries, which should prioritize cultivating normal students' course information technology capabilities and teaching informatization capabilities as important goals of library course services.

4. Conclusion

Course service represents a new model for world-class university libraries to serve faculty and student teaching and learning, offering new ideas for developing precise subject services. Against the backdrop of “Double First-Class” construction and comprehensive higher education reform, Chinese universities should actively support their libraries in innovating teaching support services such as course services, providing financial guarantees and policy support. In an information technology environment, university libraries should systematically cultivate course librarian teams, establish course service organizations, build virtual course service environments, leverage information technology advantages, establish promotion and assessment mechanisms, collaborate with educational administration departments, deepen MOOC course services, explore maker course services, achieve connotative development of course services, vig-

ously promote the improvement of university talent cultivation quality, and fully support their institutions' world-class university construction goals.

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Fu Xijin: Conducted investigation and wrote/ revised the paper;

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Pang Bo: Investigated and collected data, revised the paper.

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