

## Survey and Analysis of American University Libraries' Participation in Digital Humanities Curriculum Education (Postprint)

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### Abstract

[Purpose/Significance] With the global emergence of digital humanities, university libraries can also contribute to its development, aiming to provide insights and methodologies for advancing information literacy education in Chinese university libraries. [Method/Process] Based on successful cases of American university libraries' engagement in digital humanities curriculum education, this study investigates and analyzes aspects including educational websites, physical spaces, librarians, pedagogical approaches, project dissemination, maintenance, and resource promotion. [Results/Conclusion] American university libraries provide dedicated educational spaces and employ highly qualified digital humanities librarians. They primarily participate in education through multi-dimensional collaborative models, and make full use of library websites for digital humanities education as well as the publication and maintenance of educational projects.

### Full Text

#### Preamble

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#### Abstract

[Purpose/Significance] With the global rise of digital humanities, university libraries can also play a significant role in its development, aiming to provide ideas and methods for the development of information literacy education in Chinese university libraries. [Method/Process] Based on successful cases of

American university libraries' participation in digital humanities curriculum education, this study investigates and analyzes aspects including educational websites, venues, librarians, participation methods, project release, maintenance, and resource recommendation. **[Result/Conclusion]** The findings show that American university libraries provide specialized educational spaces and employ strong digital humanities librarians, mainly participating in education through multi-dimensional cooperation models and making full use of library websites for the publication and maintenance of digital humanities education and educational projects.

**Keywords:** information literacy education; American; university libraries; digital humanities

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Digital humanities is a discipline that reshapes research in humanities fields such as language and literature, history (archaeology), philosophy (aesthetics, art studies, religious studies, ethics) using various technical means including text mining, text analysis and statistics, geographic information systems, interactive games, image analysis, color restoration, video capture, motion analysis, and virtual reality. Through cross-disciplinary integration, it is dedicated to applying digital technologies to academic research in the humanities, digitizing and visualizing abstract theories, traditional humanities materials, and intangible cultural heritage, enabling humanities scholars to find new methods, perspectives, and fields for humanities research. It can even be said to have ushered in a new era for humanities research.

Since digital humanities is an emerging interdisciplinary field that completely overturns traditional research methods and technical means in the humanities, most research projects are undertaken by interdisciplinary teams. A search of CNKI using “digital humanities” AND “library” in titles, limited to journals, yielded only one result. This indicates that Chinese library and information experts and scholars have rarely studied library participation in digital humanities curriculum education, focusing only on discussions about libraries assisting with and providing digital humanities services.

Given that Baidu Academic indexes over 1.2 billion academic resource pages from more than 1.2 million domestic and foreign academic sites including CNKI, VIP, Wanfang, Elsevier, Springer, Wiley, NCBI, and Web of Science, covering over 400 million academic documents such as journal articles, conference papers, dissertations, patents, and books, it is one of the academic platforms with the largest global literature coverage. Therefore, Baidu Academic was selected as the investigation tool. Through advanced search, using “library” AND “digital humanities” with the research field limited to library and information science, document type limited to SSCI-indexed journals, and timeframe set to 2015 onward, 52 results were obtained. Changing the document type to books while keeping other conditions unchanged yielded 92 results; changing to conference papers yielded 83 results. The search revealed that most international research

on university library participation in digital humanities education is concentrated in the United States. These research results fall into two categories: one is studies on library participation models in digital humanities education, such as the integrated digital humanities teaching service model for university libraries proposed by New York University scholar R. Pun [1] and the TLR model for creating digital humanities teaching, learning, and research proposed by Providence College librarian D.R. Bailey [2]; the other is case studies, which are more numerous and mainly introduce successful experiences of specific university libraries participating in digital humanities curriculum education.

## Research Status

Case studies involve various academic levels, including both undergraduates and graduate students, and support a wide range of courses, from general electives to specialized courses. For example, J.W. White and H. Gilbert from Purdue University discussed the development of digital humanities research in academic libraries and explored how libraries can use digital scholarship technologies to support undergraduate digital humanities education, proposing practical solutions for integrating digital humanities courses into existing library services [3]; K.L. Sacco et al. from SUNY Fredonia considered supporting graduate digital humanities education an extension of university library work and used the University of Michigan Library as a case study to explore how librarians can help and support graduate digital humanities education [4]; librarians Z. Borovsky and E. McCauley from UCLA shared successful experiences on how libraries used venues and staff to assist in the smooth implementation of digital humanities electives [5]; K. Klumpp from the University of Queensland Library explored how libraries support learning and education in digital humanities visual arts courses [6].

Some case studies approach from a micro perspective, proposing cooperation models between libraries and relevant courses. For example, R. Fortier et al. from Marquette University introduced cooperation between libraries and digital humanities faculty [7]; D.R. Bailey from Providence College Library proposed a cooperation model for library participation in undergraduate digital art history education [8].

Research also includes support methods and approaches for curriculum education. For instance, B. Rosenblum et al. from the University of Kansas introduced how the university has identified ways to support digital humanities curriculum education and digital scholarship in recent years, analyzing the roles, responsibilities, and limitations of university libraries [9]; C.D. Shirkley et al. from East Carolina University studied how to conduct academic education in digital humanities for students through creating scholarly communication camp activities [10]; Y. Zhang et al. from UC Irvine explored the new roles of library and information professionals in the context of digital humanities, revealing effective methods for libraries to support digital humanities teaching and research [11]; E. Rutherford et al. from Australian National University studied the cre-

ation of digital badge projects at the university library, where digital badges serve as stage evidence of students' digital skills, experience, and achievements, helping to promote digital literacy education within the library and improve participants' digital humanities skills [12].

In summary, international research is substantial, with prominent results in library participation models and case studies in digital humanities curriculum education. For China, research perspectives are limited to the digital humanities itself, covering theory, technology, practice, and service, with obvious lack of research on library participation in digital humanities curriculum education and related case studies.

## Research Objects and Methods

As early as 2012, the Association of Research Libraries found that nearly half of the approximately 100 new digital humanities centers established globally that year were in the United States [13], indicating that American digital humanities education leads the world, with university libraries playing a certain role in digital humanities education. Moreover, successful cases of American university library participation in digital humanities education outnumber those in other countries. Therefore, American university libraries were selected as the investigation objects, hoping to provide references for relevant field construction in Chinese university libraries.

The research methods employed include web investigation, literature investigation, and content analysis. The web investigation method primarily involved visiting American university library websites to understand their participation in digital humanities curriculum education. This investigation examined the websites of the top 50 university libraries in the United States as published by the U.S. News & World Report website in 2017 [14], selecting 9 American university libraries that systematically provide digital humanities education services as the main research objects. Additionally, 9 other American university library websites discovered during the literature review process were investigated. The literature investigation method involved examining foreign papers and books in library and information science indexed by SSCI in Baidu Academic since 2015. Content analysis refers to the multi-dimensional in-depth analysis, induction, and summary of website content and relevant content from retrieved journals, conference papers, and books.

## Research Results and Analysis

### 4.1 Overview of American University Digital Humanities Curriculum Education

American university digital humanities curriculum education is not primarily degree-oriented, mainly including certificate courses, specialized courses, minor courses, and elective courses, with elective courses accounting for a relatively

high proportion. In terms of education types, they present diverse characteristics. Courses are mostly offered in computer science and technology majors in computer colleges and library, information, and documentation majors in information colleges, conducted through a combination of courses and projects with flexible and varied forms including discussions, lectures, student presentations, and independent or collaborative completion of digital humanities projects. Courses have high requirements for students' practical and hands-on abilities, focusing not only on training students to master tool usage but also on improving their digital humanities technical skills and independent project development capabilities, thereby enabling them to independently complete digital humanities scientific research [15].

Although university libraries are not the leaders of digital humanities projects, the diverse and practice-heavy characteristics of digital humanities curriculum education provide opportunities for their participation.

## 4.2 Ways and Roles of American University Library Participation in Digital Humanities Education

### 4.2.1 Setting Up Professional Spaces for Educational Participation

University libraries participating in digital humanities curriculum education often configure spaces with digital humanities technology experimental conditions as educational venues.

- (1) **Diverse Space Names and Styles.** Most are called digital humanities laboratories, such as at the University of Chicago Library [16] and Rutgers University Library [17]; at Cornell University Library [18], this space is called the Digital CoLab; UCLA Library calls it “The Pod,” which is essentially a series of collaborative group work areas equipped with digital displays that can connect multiple laptops simultaneously. Each display has tables and lounge areas nearby, which digital humanities faculty consider ideal new spaces for conducting digital humanities experiments, making the library a center for digital humanities student research and class activities while exposing students to the library's extensive services [19].
- (2) **Flexible Space Use and Strong Service Orientation.** University libraries often use professional spaces to flexibly arrange digital humanities education projects, activities, or courses. The University of Chicago Library mainly collaborates with the Digital Humanities Forum to regularly hold digital humanities teaching and project activities in the library; Rutgers University Library schedules teaching for digital humanities community members in this space according to their availability; Northwestern University Library generally arranges for digital humanities faculty to conduct digital humanities curriculum teaching activities in the space during two weeks of summer vacation [20].
- (3) **Multifunctional Spaces with High Sharing Capacity.** In addition to

conducting digital humanities education, these spaces also have functions for seminars, project consultation, and digital humanities activities. For example, Cornell University Library allows scholars and students to learn together in the Digital CoLab, exploring interdisciplinary and multi-level digital humanities technical skills.

**4.2.2 Equipping with Digital Humanities Professional Librarians for Educational Participation** American university libraries often participate in curriculum development and assist in teaching implementation through digital humanities professional librarians.

- (1) **Various Titles for Digital Humanities Professional Librarians.** Cornell University Library, University of Pittsburgh Library [21], Rutgers University Library, Indiana University-Purdue University Indianapolis Library [22], UCLA Library, and Northwestern University Library have established dedicated digital humanities librarian positions; the University of Chicago Library also has independent digital humanities librarians and refers to staff supporting digital humanities as data management service personnel; the University of Michigan Library refers to staff supporting digital humanities as data scholarship librarians [23]; the Digital Scholarship Coordinator at the University of Pittsburgh Library participates in digital humanities education activities. Other titles for library staff supporting digital humanities include reference assistants, directors of research and learning services, directors of digital preservation services, and instructional technology coordinators.
- (2) **Strong Technical Strength of Digital Humanities Professional Librarians.** In American university libraries participating in digital humanities curriculum education, digital humanities professional librarians possess professional digital humanities research technical skills and practical experience. Taking Cornell University Library as an example, B. Eliza is a professional digital humanities librarian with a master's degree in geography, previously serving as a geospatial data librarian and having work experience as a national engineering project manager, using digital methods to assist students and scholars in interdisciplinary research services; the library has two digital humanities interns: B. Malcolm, who leads the text analysis working group due to her participation in writing a collective biography, and C. Grace, a PhD student in English specializing in late medieval letters and letter-writing manuals who has participated in social science and humanities conferences, assisted a Python working group, and planned Cornell University's digital humanities graduate seminars.

The dedicated digital humanities librarian at Indiana University-Purdue University Indianapolis Library is P. Caitlin, whose expertise includes copyright, digital history, digital humanities, digital libraries, digital literacy, text analysis, and text encoding.

- (3) **Digital Humanities Professional Librarians Have Curriculum Development Capabilities.** The University of Kansas Digital Humanities Institute has established a curriculum development assistance program where developers of new digital humanities courses receive a \$1,000 lifetime allowance and tenure. The program stipulates that digital humanities courses can be developed from any discipline closely related to the humanities or around a specific humanities theme, but course content must cover at least 50% digital humanities skills, methods, and tool knowledge. The institute holds workshops and forums to provide guidance for new digital humanities faculty. Librarians with digital humanities skills often become participants in these curriculum developments, discussing each course process and task in forums and workshops, providing suggestions for courses and sharing classroom experiences.
- (4) **Digital Humanities Professional Librarians Can Enrich Content and Methods of Relevant Curriculum Education.** The University of Pittsburgh Library has digital scholarship coordinators provide education on digital method overviews (including text analysis, network analysis, temporal and spatial mapping, and digital exhibitions); Indiana University-Purdue University Indianapolis Library supports various workshops, training sessions, and text encoding lectures, integrating digital humanities education into classrooms and curricula, providing technical guidance for such educational research and implementation projects; at the University of Kansas, librarians are often invited to classes to discuss topics such as copyright, academic communication, and special rare document collections. Courses taught by University of Kansas librarians include traditional bibliography and research methods, supplemented with professional practical skills. These skills include how to create a CV with academic credentials, how to blog about higher education issues and literary theory, how to utilize teaching archival materials, and how to conduct digital humanities projects. Additionally, digital humanities librarians provide guidance to entry-level students on selecting tools for digital humanities project development and demonstrate tool usage, aiming to promote digital humanities course learning through numerous digital humanities projects. This not only engages students in research tasks of digital humanities disciplines but also enhances their interest in course learning through the application of a series of new technical tools.

In addition to professional digital humanities librarians participating in curriculum education, librarians from other disciplines also assist in digital humanities curriculum education. For example, in the digital humanities curriculum developed by UCLA professor W. Wendrich, three librarians from different disciplines participated, carefully selecting professional books needed by students to assist in course project learning.

### **4.2.3 Participating in Curriculum Development and Implementation Through Multi-dimensional Cooperation**

Multi-dimensional cooperation refers to collaboration with multiple types of partners and across various educational activities. Educational partners include digital humanities faculty, students, subject experts, and technicians; cooperative educational activities include workshops, lectures, seminars, boot camps, and digital humanities project cloning activities.

Northwestern University Library has many campus partners for digital humanities education, with various groups on campus collaborating with digital faculty and students to develop digital humanities projects. Additionally, there are reading groups and workshops that form a digital humanities community; partners for research and support include the Media and Design Studio and the NUL Academic and Technology Research Center; partners for activities and promotion include the Alice Kaplan Institute for the Humanities and the Chabra Center for Historical Studies.

In the digital humanities curriculum developed by UCLA professor W. Wendrich, staff includes a Middle Eastern studies subject librarian, an art and architecture subject librarian, a digital humanities librarian, a digital librarian, programmers, analysts, and students. Programmers clone Web applications before the spring semester to prepare for student experiments, while the digital humanities librarian collaborates with the professor to develop course syllabi and group project assignments, with librarians formulating plans for classes to use library resources for experiments. Digital humanities librarian Z. Borovsky suggested that Professor Wendrich divide the class into groups, with each group member assuming a role. The roles mimic the “Cloning Egyptian Archaeology Encyclopedia” project, including project coordinator, content developer, copy editor, image coordinator, metadata specialist, and markup specialist, with students free to choose their roles. This curriculum approach not only mobilizes student learning enthusiasm but also allows interaction between the library and faculty without requiring every librarian to receive digital humanities training, enabling more librarians with relevant experience to participate in curriculum education.

### **4.2.4 Building Network Platforms for Promoting Digital Humanities Education**

Many university libraries participating in digital humanities curriculum education have dedicated webpages for digital humanities education. Among them, 9 university libraries have relatively large-scale and systematic webpages: the University of Chicago Library, Northwestern University Library, University of Michigan Library, Carnegie Mellon University Library, University of North Texas Library, Rutgers University Library, University of Pittsburgh Library, Cornell University Library, and Indiana University-Purdue University Indianapolis Library.

These network platforms typically feature well-designed digital humanities education sections with rich hierarchies. The University of Michigan Library has

established a digital scholarship support section that includes digital humanities services, providing tool collection websites and project introductions in the digital humanities field, such as readings on digital humanities and outstanding cases of successfully implemented digital humanities projects; Carnegie Mellon University Library does not have a dedicated digital humanities services section but provides data mining tools and other types of text mining tools for digital humanities researchers on its website.

Northwestern University Library has designed a detailed digital humanities guide website, presenting digital humanities teaching and research information from nine aspects: introduction, projects, tools, resources, questions, readings, evaluation, funding, and partners.

The University of North Texas Library has opened a digital scholarship column, conducting digital humanities lectures, workshops, training, and themed activities, and linking to the Texas Digital Humanities Consortium website [25]; Rutgers University Library has opened a digital humanities column, with website links to relevant digital humanities resources such as the Digital Research Center, the Mid-Atlantic Regional Humanities Center, and digital humanities libguides, which provide basic concepts and introductory knowledge of digital humanities as well as digital humanities tools and related teaching documents, plus metadata standards and encoding and cataloging knowledge for text, music, images, and cultural relics; the University of Pittsburgh Library has opened a digital scholarship services (digital humanities services) section; Indiana University-Purdue University Indianapolis Library has opened a digital humanities column in its digital scholarship center, supporting students, faculty, and staff in developing digital components for digital humanities scientific research, providing consultation for all stages of digital humanities project development.

**4.2.5 Creating Digital Humanities Resource Repositories and Research Funding Recommendation Centers** Some American university library websites link to digital humanities curriculum education resources. Digital humanities resources include digital humanities tools, organizations, learning websites, digital humanities support websites, digital humanities evaluation guides, and access to digital humanities funding. The digital humanities tools published by Northwestern University mainly serve users, creators, critics, and digital humanists, providing help for experiments, research, teaching, and games. In addition to publishing tool names, they also publish tool learning website addresses. The published digital humanities tools include four types: the first is text analysis tools, including AntConc, Fromthepage, Juxta, and Voyant Tools; the second is mapping and visualization analysis tools, including ArcGIS Online, Carto, Palladio, StoryMapJS, and TimelineJS; the third is tools for publishing archives and narrative structures, including Mukurtu, NewHive, Omeka, Reclaim Hosting, Scalar, and WordPress; the fourth is tools for organizing research, including Archive-It, OpenRefine, Tropy, and Zotero. At the same

time, it introduces some digital humanities organizations, such as the Alliance of Digital Humanities Organizations; Humanities, Arts, Science, and Technology Alliance and Collaboratory; and NEH Office of Digital Humanities. Recommended learning websites include DHCommons, dh+lib, Digital Humanities Quarterly, Digital Humanities Now, Digital Humanities Questions & Answers, and Journal of Interactive Technology & Pedagogy. Introduced support websites include DHToychest, Programming Historian, and THATCamp. Academic institutions are increasingly developing and publishing digital humanities academic evaluation guides, such as the Modern Language Association, Guidelines for Evaluating Work in Digital Humanities and Digital Media, American Historical Association, Guidelines for the Evaluation of Digital Scholarship in History, College Art Association, and Guidelines for the Evaluation of Digital Scholarship in Art and Architectural History. The website publishes various channels for obtaining digital humanities funding: Alumni Course Awards, Weinberg College of Arts and Sciences funding, Digital Humanities Research funding, Provost's Digital Learning Fellowship, National Endowment for the Humanities, Digital Humanities Advancement Grants, Digital Public Projects, Digital Publishing Fellowships, Digital Humanities Institutes, and Digital Outreach Grants.

#### **4.2.6 Undertaking Publication and Maintenance Tasks for Educational Project Outcomes**

The Northwestern University Library webpage publishes 7 relevant digital humanities educational course projects. Course projects have various forms, including online archives, multimodal discourse, interactive maps, and text analysis. The online open archive project is OpenDoorArchive, completed through collaboration among scholars, poets, librarians, technicians, and students. The project is dedicated to creating a multimedia archive reflecting print culture and ethnic poetry inside and outside the United States, serving as a digital repository and online exhibition space that provides free access to journals, films, recordings, radio broadcasts, and letters.

The interactive map course project is Ancient Rome in Chicago, a digital humanities interactive map educational project for undergraduate students. Students can upload maps, videos, texts, and images through the library's digital humanities system to jointly create an online, interactive walking tour map of classical Roman-style elements in Chicago. The system includes webpages on how to annotate maps to help students learn the course well.

The digital mural course project (Chicago Mural Movement) is a first-year undergraduate course project and also a research project, mainly asking students to find photos and maps of the Chicago mural movement from the 1960s, 1970s, and early 1980s, annotate them, and upload them to the system to jointly create digital murals.

Shakespeare's Circuits is a digital map and works project of global Shakespeare drama translations and performances over 400 years, collecting more than 500 Shakespeare plays distributed across various states for exploration and appreciation, and understanding the spread and influence of Shakespeare's dramatic

works worldwide.

Video Editing for Ordinary Film Analysis is actually an undergraduate course project on video editing for film analysis, learning animation editing to expand film analysis senses. Wildwords is also an undergraduate course project where students in Northwestern University's language community use digital tools to add dictionaries or information related to dictionary compilation experience to collaboratively create encyclopedic dictionaries.

The website provides four [Figure 4: see original paper] research projects: (1) Classicizing Chicago project. This project tracks ancient Greek and Roman elements, revealing Chicago's unique characteristics as an American international metropolis. The project maps the historical contours of ancient places in Chicago, opening new routes to explore the complex cultural heritage and ancient charm of geographic and social boundaries, and establishing two open-access resource repositories. (2) Imagination Without Borders project. This project introduces the works of Japanese visual artist T. Tomiyama and the paintings and prints of T. Maruk, I. Maruki, and R. Eleanor. These four individuals all consider themselves political artists, viewing their works as protests against social injustice and the causes of such injustice. Deeply influenced by World War II, their art reflects their shared belief that war is a disaster for everyone. (3) Visualizing *Les Misérables* project. This project uses visualization tools to allow scholars and teachers to understand and teach Hugo's *Les Misérables*. (4) WordHoard project. This is a digital humanities application project about deep text reading and academic analysis. These research projects themselves are classic cases of digital humanities, serving as demonstrations for learners and researchers. Through network systems, libraries can publish students' digital humanities outcomes online, facilitating the preservation of students' research and work processes. Students are no longer just consumers of academic products; in course projects, students engage in deep cooperation and interaction with their peers, faculty, and librarians in producing digital research projects, also transforming students' perception of libraries—not just as places for books and quiet study, but as places for discovering and producing scholarship, with librarians as active partners in creating academic achievements.

## Implications and Recommendations

### 5.1 Accelerating Research and Services in the Digital Humanities Field

Digital humanities is an emerging technology and interdisciplinary field in humanities research. American university libraries actively participate in digital humanities curriculum education, primarily based on their strong digital humanities research capabilities and service capacities. In contrast, among the 34 “985” university libraries in China, subject services and research still mainly focus on intelligence information services, discipline information services, and novel sci-tech 查新. Recently, Peking University [26], Tsinghua University [27],

Tianjin University [28], Zhejiang University [29], Huazhong University of Science and Technology [30], Shanghai Jiao Tong University [31], Beijing Institute of Technology [32], and Lanzhou University [33] have added patent and competitive intelligence analysis, while digital humanities-related research is still in its infancy, lacking studies on library participation in digital humanities curriculum education and digital humanities talent cultivation. University libraries in China with strong humanities education and research capabilities should increase investment in digital humanities research and services to gain discourse power, laying a solid foundation for future participation in digital humanities curriculum education.

### **5.1.1 Cultivating Professional Librarians for Digital Humanities Research and Services**

The key for libraries to conduct digital humanities research and services lies in having professional talent in this field. American university libraries typically cultivate their digital humanities professional librarians by having staff with certain humanities expertise participate in university humanities digital research projects, enabling them to master relevant digital humanities technologies and become familiar with research content, methods, and processes of digital humanities projects, thus becoming research members of the university's digital humanities projects. With digital humanities professional librarians, libraries can participate in university digital humanities curriculum education and serve the cultivation of digital humanities talent.

### **5.1.2 Establishing Professional Venues for Digital Humanities Research and Services**

Another important way for university libraries to participate in digital humanities curriculum education is to provide multifunctional professional spaces with good service and sharing capabilities. For libraries, they are not the main research institutions for digital humanities—service is their core function. Therefore, when constructing digital humanities venues, university libraries need to be forward-thinking, building them into professional spaces that can meet the needs of digital humanities professional librarians' research, university digital humanities project research and discussion, and library participation in digital humanities curriculum education, while possessing university library characteristics.

## **5.2 Building Network Platforms for Promoting Digital Humanities Construction**

The digitization of humanities research creates better conditions for its promotion and popularization through networks. American university libraries use library websites as important platforms for promoting digital humanities construction, often using online platforms for introducing digital humanities resources, displaying and publicizing research results, and applying for activities and funding, which expands influence and reduces costs. Chinese university libraries should also build relevant network platforms from the beginning when participating in digital humanities research and education, and can learn from

successful experiences of library boutique projects to create brand columns for digital humanities construction, enabling Chinese library digital humanities research and education promotion to quickly enter the world's advanced ranks.

### **5.3 Enhancing Participation in Digital Humanities Talent Cultivation and Teaching Support**

Chinese university libraries' support and contribution to professional talent cultivation are mainly achieved indirectly through collection lending and subject services. In the United States, university libraries' participation in curriculum development and construction is significantly higher than in China. Regarding emerging digital humanities education, library digital humanities professional librarians typically join curriculum development groups, undertake auxiliary teaching tasks, especially participating in the development and implementation of digital humanities certificate courses, specialized courses, minor courses, and elective courses. As an emerging interdisciplinary field, digital humanities has not yet formed a relatively complete professional system. In American universities, digital humanities education is also conducted through cooperation with multiple disciplines in curriculum development, which is more conducive to university libraries' involvement and participation, giving full play to their personnel, technology, and venue advantages. Chinese university libraries can also deepen their participation in talent cultivation through digital humanities education, better fulfilling their auxiliary functions in university teaching.

### **5.4 Improving Funding Project Participation Capacity and Enhancing Project Service Levels**

Due to the complex technologies involved in digital humanities, both project research and curriculum development often require certain financial support. In American universities, digital humanities research projects and curriculum education usually have funding support, and university libraries, as members of funding projects, also have experience and service capabilities in project operation. For Chinese university libraries to participate in digital humanities project research and education promotion, they also need to actively participate in funding project applications to enhance relevant project service levels.

### **5.5 Adding Digital Humanities Education Content to Information Literacy Education Modules**

American university libraries have published numerous learning URLs for digital humanities tools, facilitating digital humanities project researchers and builders to understand and master relevant skills. The reason is that digital humanities is a digital skill and also a manifestation of personal information literacy capabilities. With the growing development of digital humanities, adding digital humanities education to information literacy education not only meets the requirements of the times and technological progress but also provides an opportunity for Chinese university libraries' information literacy education work

to expand into professional fields and participate in the practice of digital humanities curriculum education.

Digital humanities is a new field of humanities research, playing an important role and influence in cultural inheritance and innovation. As important institutions for resource storage research and cultural education dissemination, university libraries should actively participate and live up to their mission. However, Chinese university libraries have only recently started digital humanities research and are almost blank in participating in digital humanities curriculum education. Therefore, they can learn from the achievements and experiences of American university libraries in digital humanities curriculum education, give full play to Chinese university libraries' advantages in system, mechanism, and funding, and actively promote the construction and development of Chinese university libraries in digital humanities curriculum education and information literacy education to promote the inheritance, research, promotion, development, and innovation of Chinese culture.

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

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