

# A Research of the Training of College Librarians in Digital Humanities Professional Accomplishment

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**Abstract.** In recent years, digital humanities has become a hot research topic in China, especially in the field of library science, and more and more scholars in the industry believe that nowadays librarians should have digital humanities-related expertise and abilities. With the help of authoritative databases, this article investigates the situation of digital humanities research projects and the setting of digital humanities-related positions of domestic and foreign college libraries, expounds on the importance of training college librarians in digital humanities professional accomplishment and proposes relevant training approaches.

## Introduction

Digital humanities (DH for short) was derived from humanities computing in the 1940s. In the 1990s, with the rapid development of multimedia technology and network technology, the field of humanities research is gradually integrating with these types of technology. Currently, the object of study, tool, method and process of humanities and social sciences are all digitized little by little, giving rise to the era of digital humanities. Since Wang Xiaoguang, a professor at Wuhan University, formally put forward the concept of digital humanities for the first time in the article *The Origin, Development and Fronts of "Digital Humanities"* published on the collected papers of "Forum on Humanities and Social Sciences Research Method Innovation of the Ministry of Education" in 2010, domestic library circles increasingly pay attention to it with studies on the rise in number.

## Definition of Digital Humanities

"Digital humanities" is by no means "digital technique" simply "grafted" onto "humanistic thought". In 2014, *2014 Academic Library Trends* released by the Association of College and Research Libraries (ACRL) pointed out that digital humanities is "integrated academic achievements yielded by traditional humanities research methods with the help of digital technology". In that same year, *The NMC Horizon Report: 2014 Library Edition* released by the IFLA (International Federation of Library Associations) claimed that digital humanities will become a new trend of interdisciplinary research in the field of library science. "Digital humanities" is an interdisciplinary field of study, for example, application and effect of a variety of information technologies, including digital repository, text mining and digital library, raise higher requirements to library development and occupational qualities of librarian.

## The Connotations of Digital Humanities Professional Accomplishment from the Perspective of College Library

Professional accomplishment is professional ethics, expertise and skills that one should have when working. From the perspective of college library, professional accomplishment of digital humanities can be interpreted as expertise and abilities that a college librarian should have to be able to participate in a digital humanities research project and provide it with the support of related knowledge and digital technology. How should a college librarian comply with development trends,

make use of cutting-edge digital technology to profoundly integrate, preserve and use humanities resources, and offer better support for library digitalization and humanities service is a problem worth pondering over for every college library at present.

### The Process of Investigating the Importance of Training College Librarian in Digital Humanities Professional Accomplishment

Through methods like literature review, telephone interview and online survey, authoritative databases are used for the investigation. The statistics of all survey data was conducted in December 2018.

#### The Situation of Digital Humanities-Related Research Projects

With “library and digital humanities” as the keywords, the study searched the databases of major domestic funds like the National Social Science Fund of China and the Social Sciences Research Fund of the Ministry of Education and obtained valid 30 pieces of data in total. The concrete analysis is showed in the figure below.

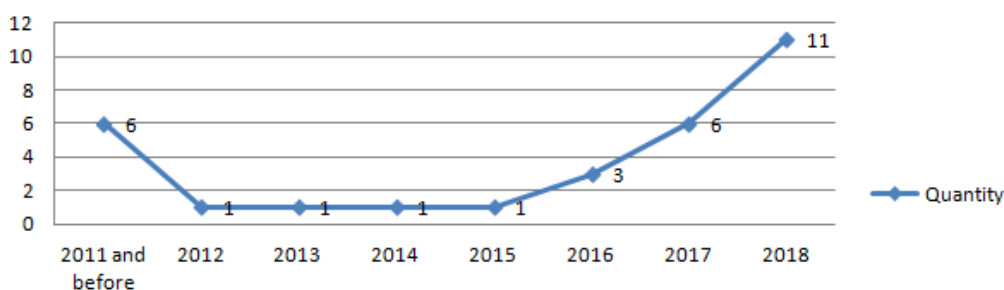


Fig. 1 Distribution diagram of the setup time of fund programs

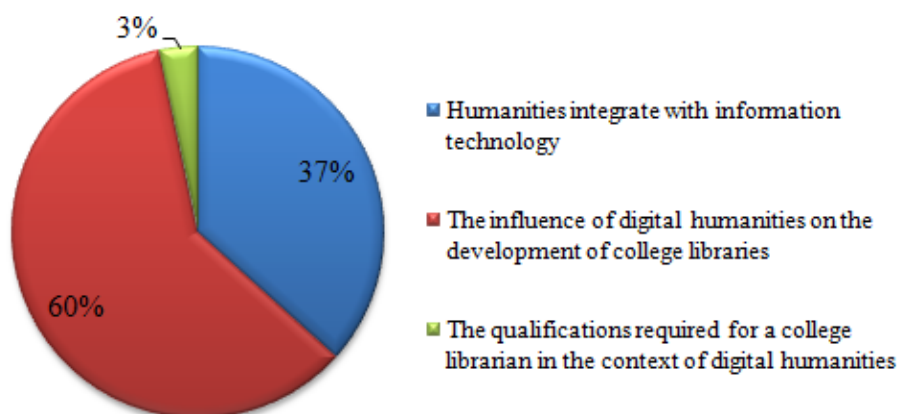


Fig. 2 Distribution diagram of the themes of fund projects

Fig. 1 Distribution diagram of the setup time of fund programs shows that before 2015 there are only a few research projects about digital humanities, but since 2015 scholars' interest in digital humanities studies soared. Fig. 2 distribution diagram of the themes of fund projects shows that 37% of these projects are about humanities like cultural relics, ancient texts and art treasures integrate with information technology, forming researches on digital humanities, while 60% studied the influence of digital humanities on the development of college libraries. Furthermore, some scholars have already set about studying the qualifications required for a college librarian in the context of digital humanities, e.g., Humanities and Social Sciences Research Youth Fund Project of the Ministry of Education-Research on Vocational Abilities of Professional Librarians of College Libraries in the Context of New Business Type presided by E Lijun, an associate research librarian at Yanshan University. It shows that library science circles began to attach importance to the training of librarians in digital humanities, which means training professional accomplishment of

digital humanities will be an important content and trend for the development of college librarian.

### The Setting of Digital Humanities-Related Positions in College Libraries

It was found by inspecting the Center Net (an international network of digital humanities centers) that as of March 2018, 197 digital humanities centers have been founded worldwide, most of which were founded by college libraries, distributed in 32 countries and regions, and 67 of them were founded in the US<sup>[1]</sup>. To better offer digital humanities services, most of these college libraries have set specialized position of digital humanities librarian and set specific job responsibility responsibilities and requirements.

Table1 The setting of digital humanities-related positions of several foreign college libraries

Setup time	Job title	Employers	Job responsibilities
2011	Digital humanities librarian	New York University Library, USA	1. Satisfy the information needs of scientific research projects of the school, offer digital humanities tools and technologies needed by scientific research, play well the role of an intermediary and coordinator, create interdisciplinary academic exchange opportunities for different subjects; 2.Improve professional reference and consultation service in digital humanities; 3.Forward thinking in the development of digital scholarship in the digital era; 4.Maintain partnerships with extramural digital humanities-related organizations.
2015	Literary and digital humanities librarian	University of California, Berkeley Library, USA	1. Carry out academic exchange services; 2. Able to create library resources in accordance with literature and digital humanities development, and adeptly manage library collection budgeting.
2016	Digital humanities librarian	Ohio State University Library, USA	1. Energetically establish a strong working relationship with teachers and students, maintain good communication; 2. Cooperate with other librarians in the library, make a list of needs by analyzing digital humanities needs of service objects, to better guide later digital humanities services; 3. Analyze future trends of scientific research with subject librarians; 4. Provide school teaching with guidance on digital tools and methodologies, provide information and training in information accomplishment, and can embed digital humanities service in teaching; 5. Know very well academic exchange, digital plan and software offered by the library; 6. Familiar with process management of academic exchange, publication mode and the developments of specific academic fields; 7. Choose various types of library resources for specific subjects, thus meeting future development needs of subjects; cooperate with other librarians in book acquisition, the discovery and use of library resources, etc.
2016	Digital humanities librarian	Cornell University Library, USA	1. Assume the responsibilities of the research and study service department; 2. Complete some of the tasks undertaken by subject librarian; 3. Hold a concurrent post of the superintendent and linkman of digital scholarship and preservation service; 4. Teach information-related courses.
2016	Digital humanities librarian	University of California, Santa Cruz Library, USA	1. Able to collaborate in research, can acquire and share information about digital humanities project, gain an in-depth knowledge of the needs of digital humanities projects in advance to be able to adapt to each research project, provide precise project collaboration services; keep close track of digital humanities research project, and offer resources needed in time; keep an eye on the latest developments of digital humanities tools and technologies, apply suitable new technologies in the library, better serve scientific research projects; broaden researchers' channels to acquire digital resources, especially data; 2. Proficiently master and use various techniques, including text analysis, text mining, academic coding, data visualization, social network analysis and digital filing; 3. Maintain partnerships with extramural digital humanities-related organizations.

Table1 The setting of digital humanities-related positions of several foreign college libraries(Cont.)

Setup time	Job title	Employers	Job responsibilities
2016	Digital humanities librarian	New Mexico State University Library, USA	1. Digital humanities librarian is required to collaborate with other librarians in the library and liberal arts departments, and advance humanities and art digital scholarship service; 2. English subject librarian should hold the concurrent post of digital humanities librarian, responsible for the consultation service about English-related collections in the library;
2016	Digital humanities and English librarian	Dartmouth College Library, USA	1. Apply digital tools to the field of humanities. Can search open-access digital resources, and label them and structurize data; 2. Provide teachers and students of this school with digital reference, consultation and guidance services; 3. Undertake digital humanities-related teaching and research tasks; 4. Plan and manage library resource database in a specific field.
2016	Digital humanities librarian	Northwestern University Library, USA	1. Satisfy the information needs of scientific research projects of the school, offer digital humanities tools and technologies needed by scientific research, play well the role of an intermediary and coordinator, create interdisciplinary academic exchange opportunities for different subjects; 2. Enhance professional reference and consultation services in digital humanities; 3. Forward thinking in the development of digital scholarship in the digital era, can adeptly master and use various techniques, including text analysis, text mining, academic coding, data visualization, social network analysis and digital filing.
2016	Digital humanities developer & digital humanities expert	Stanford University Library, USA	1. Responsible for network architecture encoding, data modeling and database management, and develop digital humanities database; 2. Mine text and data, design and develop digital humanities tools; 3. Integrate related technologies and information resources
2016	Copyright and digital humanities librarian	Dalhousie University Library, Canada	1. Satisfy the information needs of scientific research projects of the school, offer digital humanities tools and technologies needed by scientific research, play well the role of an intermediary and coordinator, and create interdisciplinary academic exchange opportunities for different subjects; 2. Forward thinking in the development of digital scholarship in the digital era; 3. Maintain partnerships with extramural digital humanities-related organizations; 4. Enhance professional reference and consultation services in digital humanities.
2017	Digital humanities librarian	University of Kentucky Library, USA	1. Offer digital humanities-related topics and teaching materials; 2. Inter-lending and document delivery service; 3. Plan and coordinate digital humanities projects.
2017	Digital humanities librarian	Florida International University Library, USA	1. Carry out academic exchange services; 2. Can create library resources in accordance with the development of literature and digital humanities, and can masterly manage library collection budgeting.
2017	Digital humanities librarian	Rutgers University Library, USA	1. Use data in teaching and research, and create digital text materials; 2. Offer expert consultation service in the forms of online publication and digital text project; 3. Study maps, texts and webs; 4. Attend digital humanities-related international conferences and projects.
2017	Digital humanities librarian	The American University in Cairo	1. Data visualization and network analysis; 2. Design and implement digital humanities projects; 3. Provide readers with accessible digital resources, and formulate project guide plans.
2017	Digital humanities and website service librarian	University of Delaware, USA	Maintain and reinforce existing web contents and transmission, assess and test visual presentation and content transmission of the webpages of the library, ensure user accessibility, and compile and analyze statistical data on users.

Domestically, National Taiwan University established Digital Humanities Research Center in 2007, which specializes in digitalizing collections and setting up a related database. Besides continuously digitalizing treasures of importance, uniqueness, instantaneity and fragility owned by the National Taiwan University, the center extends its business to important cultural capital at home

and abroad from within. In 2011, Wuhan University set up Center for Digital Humanities, which is mainland China's first digital humanities research institution and mainly explores innovative applications and approaches of various digital information technologies in humanities knowledge production, dissemination and teaching, and data-driven innovation of research paradigm for humanities and social sciences.

The studies of digital humanities started late in China and are insufficient in depth. Currently, most of domestic college libraries have not explicitly set the position of digital humanities librarian. However, in the context of digital humanities, libraries and librarians are faced with role change, as they should become highly valuable academic partners for colleges. Therefore, Chinese college libraries should set the position of digital humanities librarian suitable for their development, reinforce skills training and knowledge repository needed by digital humanities librarian, and strive to advance digital humanities services.

### **Reflection on Training Approaches of Librarians in Digital Humanities Professional Accomplishment**

From the investigation and analysis we can know that the training of librarians in digital humanities professional accomplishment is vital to the development of a college library. Suggestions for the training approaches are as follows.

#### **Reinforce the Learning of Humanities-Related Knowledge**

College librarian must have a deep knowledge of humanities. Because librarians who have a knowledge of humanities have insights and are able to explore new connotations of traditional research data when participating in a library digital humanities research project can help readers and themselves improve research skills.

#### **Reinforce Training in Digital Technology Skills**

College librarian must master data science technologies and methods, be able to integrate traditional resources and digital resources with digital technology, achieve visual representation of data, reveal multidimensional correlation between data, help teachers find valuable information, and expand the use of digital scholarship research approaches to achieve scientific research innovation.

#### **Enhance the Ability to Continue Learning**

College librarians are in an open digital information sharing space, where librarians' acquisition and training are crucial. Librarians should embrace new changes, always keep the ability to learn, voluntarily learn new techniques, and make use of new methods to broaden their horizon and improve their knowledge service skills. Besides, college librarian also need to have the courage to try with problem awareness orientation, solve the lack of knowledge service of different subjects from the perspective of digital humanities, and adjust service mode promptly.

#### **Reasonably Set the Position of Digital Humanities Librarian**

Currently, nearly no domestic college libraries have set the position of specialized digital humanities librarian, most of which are concurrently held by subject librarian or reference service librarian and the like. Nonetheless, these librarians already have onerous work, and generally lack digital humanities skills, unable to study digital humanities projects in the meantime and hard to provide more professional and deeper digital humanities service to humanities subjects of their schools, thus influencing the sustainable development of digital humanities of their schools. Hence, it is necessary for Chinese college libraries to draw on the practice of American college libraries, set the position of digital humanities librarian according to the setting of subjects, carefully select digital humanities librarians from three aspects-professional background, professional skill and comprehensive quality, determine job responsibilities and scope of services of a digital humanities librarian in accordance with the development strategy of the library, the situation of digital



humanities projects and actual needs of readers, and make the best of the role of a digital humanities librarian.

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