Analysis of Project Activities of Libraries of the People's Republic of China

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Abstract

The article is devoted to determining the current state of project activities on the creation of libraries as components of China's information infrastructure. In this study we have analyzed the state of project activities in library and information affairs, 15 of the most powerful projects on creating China's digital infrastructure. It was determined that the project activities of document and information institutions of the People's Republic of China are built on the basis of NCB (National Competence Baseline) - a national standard that takes into account the cultural aspects of an individual country. It was established: the strategies for deploying project activities are aimed at digitization, joint acquisition and use of information resources, implementation of powerful projects for creating a digital communication environment. Emphasis is placed on the need to strengthen the cognitive component, the formation of branch knowledge networks and the system of service access to them.

Keywords

Project activities, China's digital infrastructure, knowledge networks.

1. Introduction

Program and project activity is one of the main conditions for the development of society in general, and the document and information sphere in particular. The existence of educational, scientific, social, political, and economic projects indicates the orientation of society (both its economic and sociocultural spheres) on the constant search, implementation, and use of new things. Currently, there is an active process of forming a digital information space, in which document and information institutions play an important role. The forms and methods of their effective functioning in a hyperdynamic and unpredictable information environment require additional theoretical understanding. The PRC has gained some experience in the organization of work on the development and implementation of global projects, which can be useful for Ukraine. Moreover, their scale, integrity, complexity of content and implementation conditions have been growing significantly recently and require the use of innovative management mechanisms for this activity.

Chinese libraries are actively adapting the technologies of project activities to form a digital information space. Their general characteristic is a rapid change in the environment and the need to take into account the influence of external factors; the importance of professional mastery of technical and technological aspects of project management and project portfolios; involvement of highly qualified specialists - project managers in project management. An important condition for an effective project is behavioral competence, motivation and leadership, which are a necessary additional component to the technical knowledge and experience of a project manager.

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The analysis of the latest research and publications shows that the problems of the project activities of libraries of the People's Republic of China are being investigated in different directions. The authors highlight the issue of classical project management, justify the expediency and methods of project activity, consider its application in the information and library field mainly from the point of view of implementation of the social and communicative function by libraries and within the framework of the social partnership model, which provides for "exchange of information, dialogic communication, taking into account its effectiveness, the presence of a communication reaction of the recipient, a change in the roles of the communicator and the recipient, when the initiative in the interaction passes from one to the other". The current state and leading directions of project activities of academic libraries in China are reflected by leading specialists of the Sun Yatsen State Research University Qiong Tang, Yin Xie and Rina Su [5]. Chinese researchers conducted a series of studies and discussions, which can be divided into two aspects: the creation and integration of information digital resources, and the evaluation of the effectiveness of academic library activities in the direction of the deployment of information services, digital information centers serving information consumers. The experience of implementing projects for the creation of the Chinese Academic Digital Library (CADL) is provided in the work of Xiangxing Shen, Zhong Zheng, Shuguang Han, Chong Shen [6]. The authors characterized the projects of creating the Chinese Academic Library and Information System (CALIS) and the Chinese Academic Digital Library and Academic System (CADLIS). The work of Ruan L., Zhu Q., Ye Y. [4, 2] is devoted to digitization projects of unique and rare information resources, creation of special subject databases. Today, the need to form a culture of project management during the development of the information space is gaining importance. Its foundation is laid in the scientific research of Heyns E., Huijts S. [1]. The source-scientific analysis of the study of program and project activities of document and information institutions in China allows us to come to the conclusion that this direction is an important task for the modern theory and practice of the functioning and development of document and information institutions of society as components of the social communications system. At that time, there was no comprehensive idea of the project activities of document and information institutions of the People's Republic of China. That is why we believe that the study of the state and determination of the features of the project activities of Chinese libraries at the stage of digital modernization of society is an important scientific task that needs to be solved.

The article offers a study of the current state of project activities in the library field at the stage of forming of the extensive information space of the digital society and the knowledge society on the example of the People's Republic of China.

The purpose of the article: to investigate the state and determine the features of the project activities of libraries in China.

This article is aimed at solving a scientific problem associated with a certain contradiction between the considerable experience gained in the PRC regarding the provision of effective project activities in the direction of creating a socio-communication information space, a powerful system of document and information institutions that are at a sufficiently high level of technical and technological, material and service development and fragmented coverage of their work experience in scientific publications.

2. Theoretical Basis

In libraries, as the world's leading document and information institutions, interest in program and project activities began to form in the late 1970s and early 1980s of the XX century. It is the time that can be defined as the first stage of program and project development of document and information institutions. At this stage, the world experience of digitizing library collections and the development of electronic libraries began. A special feature of this stage is the transition from public initiatives for the digitization, archiving and distribution of cultural works to the initiation of national programs for the digitization of documents.

The first successful projects that were founded during this period were: the Gutenberg electronic library, "the American Memory" – electronic archive of the American national documentary memory, and the National Digital Library Program (USA). Experience in the application of project management technologies was implemented in such multimedia cultural and educational projects, as "Memory of

Spain", "Memory of the World", SCRAN (Scottish Cultural Heritage Resource Network for the museums, archives and libraries resources support), "German Library" and many others.

The result of the first stage of program and project development of digital libraries is the deployment and implementation of large-scale national programs: France (Gallica), Great Britain (Elib), Germany (Deutsche Digitale Bibliothek), Denmark (Denmark's Electronic Research Library, DEFF), Latvia (Latvijas Nacionālās digitālās bibliotēkas), Lithuania (E-library.lt), Finland (FinLib), Canada (Canadiana), Georgia (Digital Library of Georgia), the Philippines (Philippine eLib Project), Japan (National Diet Library), China (National Library of China), Australia (Digital Collections National Library of Australia), Russia (Docusfera), Poland (National Digital Library Polona), Argentina (Trapalanda), Spain (Hispanica), Japan (Kokuritsu Kokkai Toshokan) and other foreign countries [3].

At the second stage (the 90s of the XX century – 2010), global program and project activities developed within the framework of the introduction of corporate infrastructure and network formats of library projects. At this stage, the deployment of such powerful international projects for the preservation and provision of access to national cultural document and information resources as "Europiana", "World Digital Library", "Golden Collection of Eurasia", "European Electronic Library", which initiated "presentation of the entire ethnic and national diversity of world culture on a single technological basis" [3].

Project activities of libraries are aimed at solving a number of tasks: construction of premises and structures, creation of information products and services, digital information resources at the international, national, regional and local levels; formation of digital collections of cultural and scientific heritage; development of digital and electronic library projects. It can be claimed that recognition of these areas of activity as projects is possible if they meet certain criteria defined in the ISO 10006 standards, according to which projects have the following features: they are unique, unrepeatable stages consisting of processes and actions; have certain degrees of risk and uncertainty; the cost and required resources are clearly indicated. Personnel for the implementation of the project can be quite long, and the project can be changed over time under the influence of internal and external factors [5].

The above-mentioned features of the project activity allow us to define it as an effective tool for the modernization of libraries, which is actively used in the practice of forming an information environment. These processes are actualized under the influence of increasing the pace of innovative development of document and information institutions in the electronic communications system, which is realized in the creation of digital assets, the introduction of virtual forms of information products and services, and the integration of libraries into the global information space. An important factor in increasing the significance of project activities is the need to change the traditional organizational forms of management of information institutions, which justified themselves in a stable environment. Currently, the activity of libraries, which occupy a clear place in the modern system of document communications, is characterized by the intensity of changes, which requires an effective response to the transformation of the needs of the modern digital space.

Important factors contributing to the active application of project activity technologies are the deployment of the digital space, which is characterized by powerful technical and technological, economic and social dynamics; transformation of the management sphere in the direction of the formation of network library systems; world and European integration processes in the field of document and information activities, globalization and digitalization of society.

An important role in achieving the goal of modernization of library institutions is played by target complex programs, which reflect the purpose and complex of socioeconomic, cultural tasks and activities aimed at creating an information and communication environment, a system of digital resources, and the communication infrastructure of society, agreed on resources, performers and deadlines. It is appropriate to note that, in general, the program has a limited chronological framework and consists of target, structural, resource, organizational and result parts. The preparation of these components requires libraries to conduct a comprehensive analysis of the external and internal environment; determination of balanced indicators of project effectiveness, application of modern methods of SWOT analysis, GAP analysis, indicators of resource support, compliance with the sequence of goal decomposition, clear separation of technical and technological processes of development of information products and services, improvement of the efficiency of planned management activities.

3. Methodology

Within the framework of the presented research, the quantitative study of the collected data was carried out using the descriptive research methodology. During the selection of sources, an analytical method was applied in combination with the method of monitoring the content of websites. With the help of this method, the websites of the national and academic libraries of China were processed, a quantitative and qualitative analysis of the implemented projects was carried out, their purpose and tasks, and the stages of implementation were described. Among the quantitative indicators, an important place is occupied by data on the founders and participants of the project, qualitative characteristics are used to analyze its purpose and main characteristics. The main criterion for selecting projects for analysis is their scale in accordance with the number of participants and the effectiveness of the result

4. Our approach

In the PRC, design covers all spheres of human life and society. It is the project activity that is an important element of the cycle of management and development of libraries as leading document and communication institutions of society. It can be claimed that the beginning of the third millennium is characterized by a significant number of construction projects for new library buildings in China. The active development of the higher education system contributed to the development of investments in the construction of libraries. According to the research conducted [6], for the period from 2001 to 2013, only in Jiangsu Province, which has 134 colleges and universities, including 51 universities, 83 higher professional colleges, 61.2% of educational institutions built new library premises. The average area of newly built libraries is 31800 square meters.

A public library construction project with a unique design has been completed in Tianjin and got the name "the Eye of Binhai". The futuristic five-level library was designed by the Dutch company MVRDV in cooperation with the Tianjin Institute of Urban Planning and Design. The area of the building is more than 34000 m2, it can keep up to 1.2 million books. The project was started in 2014 and completed in 2017.

The characteristics of China's most powerful projects for the creation of information infrastructure are given in the table 1.

Table 1

Project name, Project aim Founders and Project foundation date characteristics participants China Academic Management of the 1800 registered Consolidation of Library & Information construction of member libraries from various information System (CALIS) libraries in the new era 31 provinces, Hong resources, human 1998 and promotion of the Kong and Macao in resources and service general development China, excluding capabilities of of university libraries Taiwan Province. mainline libraries to through the mutual support universities exchange of across the country information, assistance in the modernization and optimization of the management of

Project activities of the PRC on the creation of library systems as components of the information infrastructure

	information resources; creation and improvement of the system of public services, supporting the development of university libraries; creating new business formats and new methods that support the creation of		
China Education and Research NETwork (CERNET). 1994	libraries in a new era and help libraries. Support and promotion of informatization of education.	Funded by the Chinese government, managed by the Chinese Ministry of Education, built and operated by 10 universities, including Tsinghua University	A key education informatization infrastructure in China and an incubator of educational Internet applications aimed at promoting the modernization of education
China National Knowledge Infrastructure (CNKI) 2000	A leading national research and information publishing institution in China, providing online subscription services with central website and 80 mirror sites across the country.	Headed by Tsinghua University with the support of the Ministry of Education of the People's Republic of China, the Ministry of Science of the People's Republic of China, the Department of Propaganda of the Communist Party of China and the General Administration of Press and Publications of the People's Republic of China.	Consists of more than 70 special databases. Contains full-text articles from more than 4 000 Chinese journals devoted to economics and management, doctoral theses, candidate theses in medicine, mathematics, history, economics, management, education, sociology,
National Cultural Information Resources Sharing Project	Collection and digitization of various objects of cultural heritage, ensuring wide user access to it.	Headed by the Ministry of Culture of China.	etc. Has a three-level network with a national-level center, more than 30 provincial information centers and more than 5000 information centers in counties, cities and communities.

The International Dunhuang Project 1994

Alliance of strategic cooperation of integration of libraries and society. April 3, 2018.

To make information and images of all manuscripts, paintings, fabrics and artifacts from Dunhuang and Eastern Silk Road archaeological sites freely available on the Internet and encourage their use through educational and research programs. **Promoting tripartite** cooperation, promoting comprehensive development of libraries and publishing houses, overcoming production information barriers, forming a long-term dialogue and highlevel cooperation mechanism, as well as helping libraries and publishing houses to achieve quality, efficiency and motivation in the development of resources and products; reforming and creating an ecosystem of integrated development of the entire industry chain.

The British Library and 22 participants from 12 countries including the National Library of China, Dunhuang Academy, National Library of France and 5 museums.

Founder: management center, library and CALIS publishing house.

Areas of activity: 1. To create a longterm effective mechanism of communication and coordinated development between the library and the publishing house, entering a new era. 2. To explore innovative B2B business models in the copyright publishing industry. 3. To create a comprehensive information services platform for libraries and publishers, including an integrated platform for collection and editing and a platform for publishers that integrates paper and digital formats, to promote the comprehensive integration of upstream and downstream business, information and data in the industry.

Contains 536441

images and over

135000 catalog

entries.

New Generation Library Service Platform Construction Alliance. May 21, 2018	To create a community that unites resources and strong points from various sources, accumulates practical experience of libraries and the information technology industry, stimulates cooperation, joint innovation, improves rules, explores the mechanism of joint development of university libraries, and creates permanent support for the Open Platform for innovative development.	CALIS Management Center together with the Beijing University Library, the Shanghai Jiaotong University Library, the Renmin University China Library and Shenzhen University Library	Areas of activity: 1. To create an open, dynamically expanding cloud service platform of the library that supports individual development. 2. To form a set of mechanisms for the design and development of new generation library systems. 3. To form a diversified alliance of developers to create a rich and active market of library applications.
Digital Resource Acquisition Alliance of Chinese Academic Libraries	Uniting and collaborating to purchase digital resources, standardize purchase behavior, and present digital academic resources to member libraries through alliance efforts, as well as seeking for better price and better service.	Academic libraries of China.	Areas of activity: 1. Evaluation of the group purchase database. 2. Coordination of the database. 3. Review and release of the group purchase plan. 4. Organization of training. 5. Selection of a group purchase agent. 6. Supervision of after-sales service.

China's document and information structures are creating digital libraries where thousands of libraries present their analog collections to reach a new generation of learners and provide free, long-term, public access to knowledge and cultural heritage. The characteristics of the most powerful electronic library projects in China are given in Table 2.

Table 2

ist of digital library proje	ects in China		
Project name,	Project aim	Founders and	Project
foundation date		participants	characteristics
The China Academic	Creating a digital	Funded by Carnegie-	Includes over 2.5
Digital Associative	library; digital	Mellon University and	million scanned
Library (CADAL) 2000.	integration of scientific	Zhejiang University	books, newspapers,
Since 2002 p. united	achievements;	with the support of	magazines, videos,
with CALIS.	creation of a platform	the US National	audiobooks from all
Since 08.2009 the II	designed to study the	Science Foundation	periods of Chinese
phase of the CADAL	use of multimedia and	(NSF) and the Ministry	history.
project.		of Education of China	

	virtual technologies in digital libraries.		
Chinese National Science Digital Library (CNSDL) 2001	Providing support for scientific research, creating "knowledge services" within the digital library; creation	Academy of the PRC	Purchase of commercial electronic resources, creation of own databases of Chinese
	of information resources and their management system; promotion of rapid exchange of scientific information; strengthening the functions of the digital library as the "desktop" of every scientist in China.		scientific literature (over a million records) in chemistry, biology, physics, mechanics, optics, mathematics, astronomy, geography, computer science.
China Digital Library Program (CDLP) 1998	Creating a digital library of primary sources to provide a better preserving and studying of the heritage of Chinese culture.	Founder: National Library of China with the support of the Ministry of Culture of China.	The main area of activity: creation of a nationwide platform for expanding access to digital storage prepared during the implementation of this project. The latest version of the platform includes the Founder Knowledge Database.
China National Science and Technology Digital Library (NSTL). June 12, 2000	Strengthening guarantees of access to national scientific and technical resources; improvement of services related to the use of scientific and technical resources, integration of resources, development of mechanisms for joint use of resources with other national information services of	National Scientific Library of the Chinese Academy of Sciences, Institute of STI of China, China Institute of Mechanical Engineering Information, China National Institute of Standardization, China Institute of Metallurgical Information and Standardization, China National Chemical Information Center,	Includes Chinese, Japanese and Russian scientific and technical journals, conference materials in Chinese and English, English scientific reports and theses in Chinese and English; patents from China, Australia, Germany, France, England, Japan, Russia and America, as well as two organizations
	scientific and technical information.	Institute of Agricultural Information, Institute	(EPO and WIPO); Chinese and foreign standards. NSTL

of Medical Information actively purchases

		of the Chinese Academy of Medical Sciences, Library of Standards of the Chinese National Institute of Standardization, Literary Library of the National Institute of Metrology.	online and full-text editions of journals for users across the country, pays attention to the acquisition of large international retrospective literature databases as a key resource for science researchers throughout China. NSTL includes literature on Chinese national history. NSTL embodies a set of standardized and scintific workflows and mechanisms, from literature collection to resource processing, data storage, network services, and scientific literature data analysis.
The Chinese Text Project. 2006	Creation and development of an online digital library with open access for readers and researchers around the world to Chinese philosophical texts.	Founder: Donald Sturgeon.	An effective search engine "Xue Yuan Ji Gu" has been developed. A set of digitization standards has been developed, including metadata, cataloguing, processing and
The Academic Digital Library of Chinese Ancient Collections (ADLCAC). 2000	Creation of one of the largest databases of ancient Chinese materials stored in Chinese university libraries.	Founded in the Library of Ancient Collections of Beijing University jointly with The library of Nanjing University, the library of Beijing Pedagogical University, the library of Sichuan University. Currently, it unites 27 libraries. Received support from CALIS, became a key project in the tenth	digitization criteria. Contains over 660,000 metadata records of ancient materials, 290,000 photographs of sample book pages and full-text images, and 83,500 e-book volumes. An effective search engine "Xue Yuan Ji Gu" has been developed. A set of

project in the tenth digitization standards

CALIS five-year plan (CALIS Phase II).

Confederation of China Academic Institutional Repository (CHAIR) Facilitating the creation of a national university institutional repository, promoting open access to academic achievements, and promoting the wide application of academic achievements. CALIS and Chinese University Libraries

including metadata, cataloguing, processing and digitization criteria. Areas of activity: 1. **Research conduction** and policy formulation: to conduct research and to study the policy related to the creation and development of alliances and to develop appropriate policies. 2. Making up standards and norms related to the institutional systems of the platform of knowledge bases, data and services. 3. **Building a system** platform: in accordance with the general needs of alliance members, carry out the development, updating and daily maintenance of the central CHAIR system and the local system; to carry out certification of commercial products in accordance with the requirements of alliance members. 4. Propaganda, promotion and training: promotion of the concept of open access, various services provided by the alliance, organization of meetings and training.

has been developed,

The result of the study is the recognition of project activity as an effective tool for the transformation of library and information institutions, which is used for the purpose of building new premises and separate buildings, developing information products and services, creating digital information resources at the international, national, regional and local levels; formation of digital collections of cultural and scientific heritage; development of digital and electronic library projects. It was established that the projects must meet certain criteria defined in the ISO 100006 standards.

At the same time, the project activities of the libraries of the People's Republic of China are based on NCB (National Competence Baseline) – a national standard that takes into account the cultural aspects of the country. The basic rules for the development of the national standard are identical to the ICB and contain up to 10% of elements of competencies that reflect the national features of project activities and business methods. According to the NCB development rules: the ratio of competence elements in the NCB must be identical to the ICB; the national association may add up to 10% of competence elements to reflect the situation and customs of the region; the national association can adapt the ICB when transferring it to the NCB, taking into account the situation and customs of the region [1]. The creation of the national standard C-PMBOK (China), which is used to standardize project and program management processes, deserves special attention. This standard takes into account the special conditions and characteristics of China. It is used as a guide in project management and helps establish effective communication between project managers in China and foreign colleagues. The final document of the standard was published in April 2002 and is successfully mastered by document and information institutions.

It was determined that libraries use different types of projects in their activities, including: monoprojects, multi-projects, mega-projects according to the scale of the tasks to be solved. A feature of project activity in China is complex multi-projects consisting of mono-projects. Under the leadership of the state, powerful mega-projects for the development of libraries are also implemented, which are implemented as components of comprehensive programs for the development of regions. Characteristic features of megaprojects are their high cost, long implementation period, and the use of a wide range of forms of financing. These types of projects differ in a certain way in technological, methodological, technical, managerial approaches to their development and implementation. It was emphasized that the recent active development of the libraries of the People's Republic of China as components of the information infrastructure of the state requires the formation of 'portfolios' that include projects and programs of various types, cost, risks, strategic importance, novelty, territorial subordination.

5. Conclusions

The data of the conducted research prove that the socio-cultural design of the information and communication environment of the People's Republic of China aims to realize the tasks of creating a highly spiritual intellectual space, protecting the interests of the state, society and an individual. In order to fulfill this task, powerful projects for the construction of libraries, the creation of full-text databases, and the formation of a knowledge network have been introduced.

It was established that the first stage of project activity on the formation of the system of document and information institutions of China began in the 70s of the XX century with the construction of modern library buildings, in accordance with the requirements of informatization. Activities in this direction remain one of the leading ones to this day. At the second stage, the program and project activities of document and information institutions of China are deployed in the direction of the formation of digital libraries. The most powerful project was implemented within the framework of the creation of the Chinese Academic Digital Library, work on which began in 1997. This project initiated the construction of China's digital library system, and also proved the high efficiency of the application of program and project management technologies for the formation of the country's information environment.

The analysis of the most powerful projects proved that the project activity on creating a system of document and information institutions in China was developed in accordance with the implementation of projects on the development of the higher education system. The most famous of them are "Project 211" and "Project 985". At the end of the XX century, project activities on the formation of China's document and information environment developed in the direction of the integration of scientific library

resources and the creation of digital libraries for the higher education system. A clear example of activity in this direction is the creation of the Chinese Academic Library and Information System as part of the CALIS project, the implementation of the CERNET project – the first nationwide computer network in the field of education and research in China, the CADAL project – the creation of the Chinese Academic Digital Library. The CADAL project covered about more than 60 Chinese academic libraries and integrated the information centers of leading universities in Beijing, Tsinghua, Fudan and Nanjing. It is noted that the result of the project is the operation of the world's largest non-profit digital library with more than 2.5 million books, which provides a universal personalized information service based on powerful multidisciplinary, multilingual digital resources.

It was determined that the third stage of the project activity of document and information institutions is their focus on strengthening the cognitive component, forming knowledge bases from various fields and forming a system of information access to global knowledge. It was established that at the third stage of the digital modernization of society, an important direction is the creation of powerful industry resources within the framework of CASHL projects – China's academic library for social sciences and humanities, which unites 17 university libraries in China; ADLCAC – Digital Library of Chinese Old Prints, which includes over 310 000 meta-descriptions of old prints, 26 000 book photos, sample pages, and full-text images. 10 000 volumes of electronic books presented in ADLCAC create a single information space of old prints for a group of libraries, contribute to the effective implementation of new technologies and services for users. It is noted that currently, the creation of collections of unique or rare resources of academic institutions by digitizing them and organizing them by topic is an important direction of digitization of Chinese libraries

6. References

- E. Heyns, S. Huijts, Fostering a culture of project management practices A maturity model for libraries, in: A. Daugherty, S. Hines (Eds.), Project management in the library workplace, Emerald Publishing Limited, 2018. doi: https://doi.org/10.1108/S0732-067120180000038011.
- [2] L. Ruan, Q. Zhu, Y. Ye (Eds.), Academic Library Development and Administration in China, IGI Global, 2017. doi: 10.4018/978-1-5225-0550-1
- [3] O. Yu. Marina, Library in digital space, KhSAC, Kharkiv, 2017.
- [4] P. Chen, M. Qiang, J. N. Wang, Project management in the Chinese construction industry: Sixcase study, Journal of construction engineering and management 135(10) (2009) 1016-1026. doi: https://doi.org/10.1061/(ASCE)CO.1943-7862.0000067.
- [5] Q. Tang, Y. Xie, R. Su, Assessment and Evaluation of Academic Libraries in China, in: Library Science and Administration: Concepts, Methodologies, Tools, and Applications, IGI Global, 2018, pp. 946-965. doi:10.4018/978-1-5225-3914-8.ch045.
- [6] X. Shen, Z. Zheng, S. Han, C. Shen, Overview of the main projects that make up the Chinese Academic Digital Library, Electronic Library 26(1) (2008) 39-54. doi: https://doi.org/10.1108/02640470810851725.