The Construction of Collaborative Innovation Service System of University Library Think Tank

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Abstract

This paper analyzes the present situation of Chinese university library into think tank through literature investigation. This paper puts forward the suggestions and countermeasures for constructing the cooperative service system of university library think tanks in five aspects: talents management mechanism, research management mechanism, result review mechanism, knowledge management mechanism and evaluation mechanism, which based on the problem of library think tank-type service, combining the demand and orientation of university library.

Keywords

University Library, Think Tank Construction, Collaborative Innovation, Service System

1. Introduction

Think tanks, also known as think tanks, think tanks, advisory bodies, etc., generally refer to non-profit research organizations with the responsibility of public policy research, analysis and evaluation and the goal of influencing policy decision-making and implementation (Pang, 2015). In 2015, the General Office of the State Council issued "The Opinions on Strengthening the Construction of New-type think tanks with Chinese characteristics" (Gov.cn, 2015), clearly stating that "the think tanks do not provide enough high-quality research results and lack of participation in decision-making consultation," need to "set up a set of sound governance, dynamic, strong regulatory think tank management system and operational mechanism." The 2016 China think tank annual development report (Research and Publication Center of Guangming Daily, 2017) also

suggests that China think tanks should strengthen continuous, original and forward-looking research. The report of the 19th National Congress of the CPC once again stressed that strengthening the construction of new think tanks with Chinese characteristics is a major strategic decision made by the CPC Central Committee in order to improve the decision-making consultation system, enhance the ability of national governance and enhance the soft power of the country (sohu.com, 2019). A university think tank is an organization affiliated with a university engaged in policy research and decision-making consultation (Yu, 2016). The high-level experts and scholars, the complete subject foundation and the targeted service system are all the resource conditions for the university library to build a new type of university think tank. The capacity construction of university library think tank should be consistent with the construction direction of university by the Party and the state at present, which shows the Chinese characteristics of university library think tank. This paper will discuss how to construct the service system of collaborative innovation in university library from five aspects of talents management mechanism, research management mechanism, result review mechanism, knowledge management mechanism and evaluation mechanism. Talent is the engine of think tanks' achievements, and the building of excellent talent team is crucial for improving the research capacity of think tanks; the research management mode determines the overall research direction and research cooperation pattern of the think tanks, that is the core of orderly and efficient output; the result review mechanism of a think tank is an important means for quality control and self-improvement of research results; the knowledge management system as an efficient result management means helps the think tank to build a complete and structured knowledge system which saves the time cost of the research process, realizes cross-region knowledge sharing and achievement sharing. Reasonable evaluation mechanism can continuously improve the quality of the achievements of university think tanks, so that the achievements of all kinds of think tanks continuously emerge. The purpose of this paper is to provide some feasible ideas for the construction of university library think tanks in China.

2. The Current Research Status of University Think Tanks in China

The United States think tanks are early origin and rich in theoretical research and practice. For example, the research on think tanks mainly includes the research on the concept, characteristics and types of think tanks, the role of think tanks, the boundary distinction between think tanks and other policy participants, and the evaluation research on think tanks. The Hoover Institute that affiliated to Stanford University in the United States is one of the representative foreign university think tanks. Hoover's research focuses on policy research, which aims to provide government advice and become a government think tank. In China, on January 19, 2020, the author used "University Library + think tank" to

search the journal database of CNKI data base, and obtained 189 documents, and published related research documents The chronological trend of the table is shown in Figure 1. As can be seen from Table 1, in 2010, the local university library was proposed to seize the opportunity and carry out the think tank-type service, but it did not attract the attention of the library community until 2013 when the new type of think tank was incorporated into the national development strategy. On February 10, 2014 "The Plan for Promoting the Construction of a New Type of University Think Tank with Chinese Characteristics" put forward: "The organizational form of university think tank with diversified situation and reasonable structure, innovation of system and mechanism, integration of high-quality resources, and building the brand of university think tank to promote the overall improvement of social service ability of colleges and universities." The development of university think tanks in China has only begun to enter a new chapter, and the research of university library think tanks has been growing rapidly since 2016, and the literature published in 2018 and 2019 has reached the peak of recent years, which also shows that people hope the library of the university can play a more important role in the university and the society through the improvement of the construction function of the think tank.

From the high-frequency keywords appearing in the 189 articles in Figure 2

Table 1. Chronological distribution of related research literature.

Date of publication	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	Total
Number of posts issued	55	61	35	26	6	1	2	0	1	1	189

Table 2. High frequency keywords TOP5 in research literature.

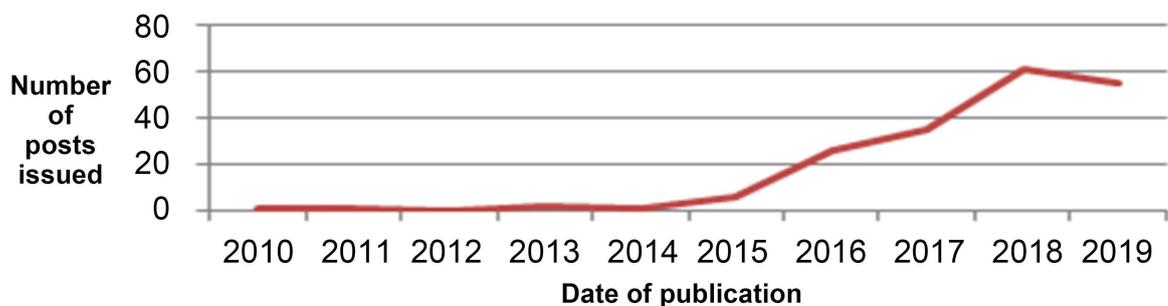| High-frequency keywords	Frequency
Decision-making consultation	34
Information services	34
Information resources	17
Sci-tech novelty check	16
Intelligence services	10

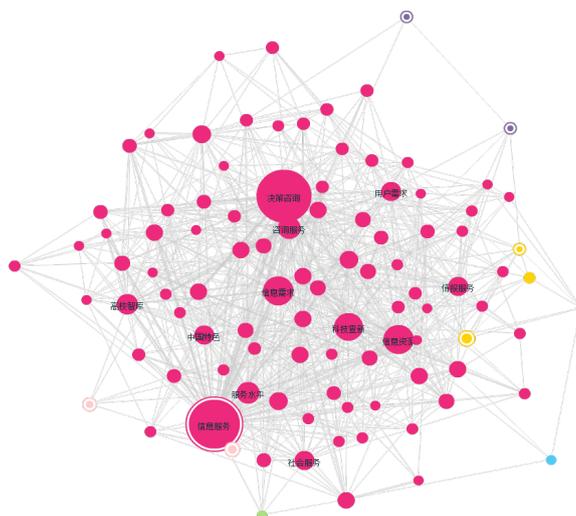Figure 1. Trend of document release of university library think tank.

Figure 2. Keyword co-occurrence network visualization analysis of research literature.

and Table 2, it can be seen that the current research focus is on how the university library carries out the think tank-type services, and the contents of the research on the think tank-type services are suggested in decision-making consultation, information service, Sci-tech Novelty Retrieval scientific and information service, it is close to the traditional library service, and there is no in-depth discussion on the development of think tank-type library service. From the content analysis of literature research published in China, the deficiency of library research on think tank service in China is mainly as follows: Most of the existing researches theoretically discuss the concept of library information service introduced into think tank service, and the results of some case studies are also discussed from the general perspective of library consulting services, information services or intelligence service. There was less discussion of specific think tank-type services Therefore. This paper focuses on how to systematically sort out and explore the construction of collaborative innovation service in university library in five aspects: talents management mechanism, research management mechanism, result review mechanism, knowledge management mechanism and evaluation mechanism.

3. Building the Collaborative Innovation Service System of the Third Think Tank

Collaborative innovation is a complex form of innovation organization. the knowledge sharing and exchange mechanism is formed by different knowledge subjects in the organization or multiple organizations. The innovation subjects hold common goals, values, internal motive force, and effectively gather innovation resources and elements, carry out in-depth cooperation to achieve win-win results. With the deepening of the construction of knowledge-based society, the construction of think tank has become one of the key directions of the development of university library. How to construct a think tank service system in ac-

cordance with the development needs of colleges and universities under the strategy of innovative development is directly related to the research level and influence of colleges and universities. According to the actual situation of the operation of the think tank of university library, the basic elements such as talent management mechanism, research management mechanism, result review mechanism, knowledge management mechanism and evaluation mechanism of the think tank need to be driven by innovation, which will deepen into a scientific system, and realize forward-looking and guiding service efficiency.

3.1. Matrix Talent Management: The Engine of a Think Tank's Results

This paper investigates the top ten institution of influence of university think-tank (characteristic) system mentioned in the Report of "China Think Tank Report 2018" by means of network investigation and literature investigation, and these 10 university think-tanks build, organize system and the construction and the conversion of the achievements of the think tanks lead the development of China's university think tanks. The investigation of these think tanks will help to understand the status quo of the construction of China's university think tanks and guide the system construction and system innovation of the think tanks of university libraries. In the course of the online survey, six of the 10 university think tanks posted an organizational structure on their websites. As shown in Table 3, three think tanks have a board of trustees, one has a central director-in-charge system, and two are headed by presidents, with executive presidents

Table 3. Statistics of organizational structure of university think tanks.

SN	University	Name of think tank	Organizational structure
1	Zhejiang University	China Academy of West Region Development	Council, Hospital Committee, Academic Committee, Human Resources Committee, Research Institutions, Administrative Institutions, Service Platforms
2	Nanjing University	Yangze Industrial and Economic Institute	
3	Xiamen University	Graduate Institute for Taiwan Studies of Xiamen University	Council, Academic Committee, Management Committee, Research Institutes, Research Centres
4	Zhejiang Normal University	Institute of African Studies Zhejiang Normal University	
5	East China Normal University	The Center for Modern Chinese City Studies	Director of the Center, Academic Committee
6	Guangdong University of Foreign Studies	Guangdong Institute of International Strategies	President, Vice-President, Secretary-General, Research Centre, Editorial Department, Secretariat
7	Guangxi University	China-ASEAN Research Institute of Guangxi University	
8	Shanghai International Studies University	China Institute of International Public Opinion,	
9	Shanghai University of Finance and Economics	Shanghai Institute of International Finance Center,	Board of Governors, Academic Committee, Chief Specialist, Management Team
10	Central China Normal University	China Rural Research Institute	Dean, Consultant, Director of Office, Research Centres

and vice presidents under them. This shows that the construction of institutions of think tanks in colleges and universities in China is not perfect, and the operation mechanism of most think tanks is not sound, and there is no continuous system of think tank operation system.

The operation of university library think tank should give full play to the intellectual resource advantage of university, especially the talent advantage of subject librarian of university library, at the same time, take the realization project goal as the core, constitute the simple, efficient and economical personnel allocation. Therefore, we can draw lessons from the operation mode of some foreign research projects, organize the librarians of relevant departments of the library to participate in a certain think tank project, set up the temporary organization of cross-department (Baike.baidu.com, 2015). In accordance with that characteristic of the matrix organization structure and the function of the university library itself, the departments can be divided into the intelligence department, the information service department, the information consultation department and the administrative department, which are under the unified leadership of the council, and adopt the system of director responsibility of the center. In that intelligence department, a well-known professor in the school is engage to act as the director of the project, and works with the subject librarian of the library to organize the multi-disciplinary experts and scholars to form the core research team of the project for completing the processing, research and utilization of the document content. By using the means of literature retrieval, the personnel of information service and letter department compare the novelty of the project and give the conclusion, so as to do a good job of research and literature collection for the preliminary research of the think tank. The staff of the Consulting Services Department may complete the promotion of the results of the think tank, and regularly organize the training, lectures, forums, media publicity and publication of the results of the think tank. The executive can serve the day-to-day administrative work of the project team and assist the work of other members of the think tank. In comparison with other organizational structure, that matrix organizational structure adopted by university library think tanks is to take the project as the center to attract the librarians with various expertise, and the internal task of the project organization is clear, the objective is clear, and the fixed structure is avoided. The passivity of team members and the formation of a competitive relationship between project groups can ensure the mobility and flexibility of the composition of personnel in the operation of a think tank project. The experts of the think tank shall organize well-known professors in and out of schools in the form of entrustment and appointment, and constitute full-time and part-time researchers of the think tank. This paper constructs a think tank talent model which is composed of "subject librarian + famous professor in school + doctor/master degree graduate student." 1) The core of the research team of the think tank is well-known professors in the school. Make full use of the multi-disciplinary intelligence resources possessed by colleges and universities, and employ experts and professors from various disciplines as the

main research force of university library think tanks. 2) Subject librarian, doctoral/master degree graduate students are the research support staff of the think tank. The research supporter of the think tank is an important part of the research team of the think tank, for the university library, the subject librarian has a certain subject background and has the specialized training of literature and information, and is the user who can go to the specific subject field The multi-disciplinary professionals who provide deep-level and personalized information acquisition and utilization services can serve as the basic strength and daily operation team of university library think tanks, and employ doctoral and master degree students from various disciplines at the same time It is a part-time assistant to make up for the shortage of the staff and subject coverage of university library think tanks. 3) Taking "subject librarian + well-known professor in school + doctor/master's degree graduate student" as the talent composition of university library think tank, the diversified talent composition is helpful to carry out the work of the think tank project group and improve the project research As a result of the quality and efficiency of the project research, it also assists colleges and universities to train doctoral and master degree students and train and reserve talents of think tanks for the country. Please refer to Figure 3 for the organization chart of the think tanks of university libraries.

3.2. Research Management Mechanism: The Guarantee of Scientific, Orderly and Efficient Output of Think Tanks

The research management mode of university think tanks can be divided into two layers: "Research direction framework + research group system." The research direction framework is mainly based on the future research strategy of the think tank, which is jointly developed by all researchers and updated according
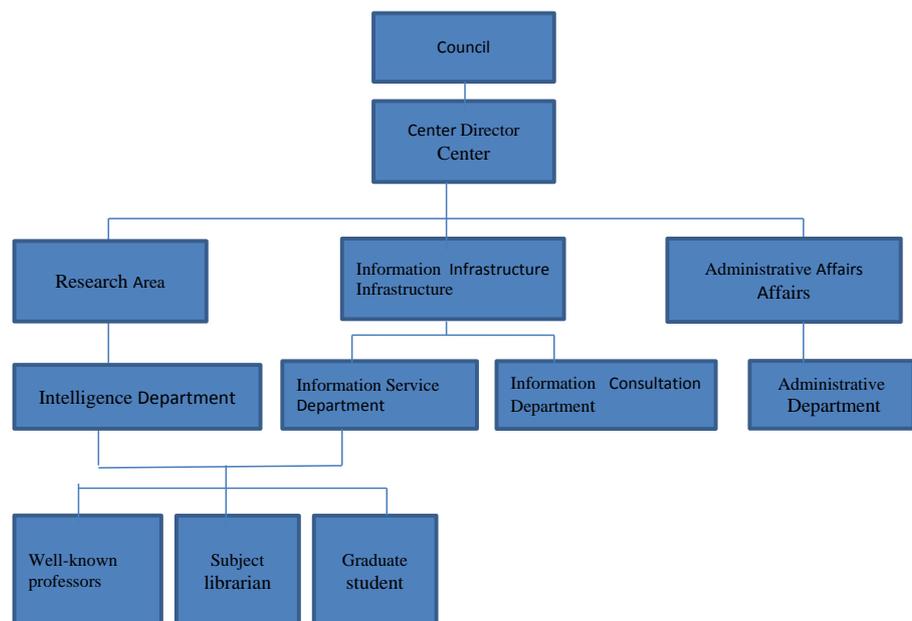

Figure 3. Organizational structure of the matrix system of university library think tank.

to the needs. In order to fully integrate that research direction framework and the policy practice opinions, the opinion of different departments can be integrated through the establishment of the tripartite consultation mechanism of the scientific research advisory committee, the scientific research personnel of various departments and the administrative department, Provide the most scientific guidance for research management in think tanks. The organizational structure of research management can be divided into different research groups according to research direction and research background. The team leader is only responsible for organizing work, and each group should be oriented to knowledge production and output, so as to ensure individual research creativity and learning Freedom of art and even equal communication within (Swp-berlin.org, 2012). In the implementation of the project, the team personnel deployment presents matrix-like characteristics, strong horizontal connection, and cross-group reassignment can be carried out at any time. The research topics are mainly divided into three categories: Personal topics, group routine topics and urgent research topics. All subjects shall be discussed and reviewed by the research team and department leaders, and the project completion cycle shall be established, and each team shall carry out project promotion or acceptance according to the overall work plan.

When all research results are entered manually and automatically combined, a uniform format shall be specified. 1) Researchers enter as much original information as possible. It includes process draft, meeting minutes and so on, so that the future researchers can not only see the research results, but also see the process of the research results, which is the place where the knowledge base is different from the general research results base. 2) Classify and archive the original knowledge manually and automatically. Firstly, the system automatically extracts the author, title, time, publication and other information, then manually classifies the non-programmed factors such as project sequence and research field, inputs detailed information, and enriches the knowledge base system.

The management and use of research results shall establish hierarchical use rules to ensure information security. 1) Establish a security system for information browsing. According to the confidentiality level of research results, the system can be divided into three levels temporarily: General level, access users can browse all the published contents; experts of the school can browse heavy information that is not suitable for disclosure for the time being In addition to browsing all the contents of the knowledge base, the administrative leadership level of the university can also supervise the management users. Low-level users are not limited to browsing their own research findings on the subject. 2) Establish an information management security system. Each person participating in the information management shall abide by the rules, strictly observe the confidentiality discipline, keep confidential the work secrets, establish relevant confidentiality supervision measures in various processes, and trace the leak back to the source of the leak once found, and make a system Determine the relevant

handling regulations for the divulging personnel.

3.3. Results Review Mechanism Quality Assurance of Outputs of Think Tank

The results review mechanism is an important means for quality control and self-improvement of research results by think tanks; the research results of university think tanks can be divided into two parts: Face-to-face policy consultation and written research results. Face-to-face consultation can be conducted through external meetings such as expert seminars and symposiums, which has the advantages of quick information transmission, less process intervention and direct face-to-face communication with relevant departments. However, the prerequisite of face-to-face consultation is to obtain the full trust of the administrative departments, government departments and social enterprises of colleges and universities, and the trust is often based on the preliminary research results. In addition, pen research results are indispensable to the systematic in-depth study of complex policy issues, which is the cornerstone for researchers to participate in academic discussions, gain academic recognition and even become an existing authority.

The internal audit mechanism of the results of university think tanks can be divided into three major processes: Internal written assessment procedure factual verification editing and reviewing. The first process is an internal written assessment process. According to the form of the article, the procedure can be divided into two modes: "Single-stage audit system" and "double-stage audit system." In general, for "current affairs consultation," the information to be published in a timely manner may adopt the "single-level audit system," i.e., the information shall be approved by the leader of the research team, so that the emergency can be presented in a concise, clear and prompt manner through the database Process and results of the piece. For "research papers and reports," the "two-level review system" is adopted: The first stage is "internal peer review," and the internal peer reviewer of the think tank prepares the opinion report to clearly give the opinion that "can be expressed" or "needs to be modified". The second stage is "review by the leader of the research group." Research papers and reports do not recommend too many pages, and 1 - 2 pages can be used to highlight the content of the core content to improve the readability of the article and the effectiveness of policy recommendations. The second process is that the "factual check" only aims at the contents published on the website, and the information service department uses professional means to investigate the citation of documents and the authenticity of data. The third process, "editing and revising," focuses on improving the language quality and publishing format of the research results. External results review is an effective supplement to the internal results review mechanism, but it is difficult to institutionalize it, mainly through the academic network or social media of the members of the research team. In addition to monographs, papers and other research results, but also pay attention to think tank librarians in the media performance. The activities of

think-tank librarians can be recorded in written form on the front page of the official website and in the media topic column of the expert academic achievement database, which can include some special interviews, meeting discussions and so on. Participation in these activities not only reflects the research level and influence of the individual librarians of the think tank and even the think tank, but also enables the researchers to fully obtain external opinions and suggestions, and improve the research depth. See Figure 4 for details of the results review process.

3.4. The Construction of Knowledge Management System: The Scientific Means of Achievement Management of Think Tank

The knowledge management system manages the data and research results that need to be digitally presented by the think tank, and forms a knowledge sharing platform open to the think tank researchers, so that the researchers can access, retrieve and accumulate the research of the think tank at any time Research results, for each study can have a new breakthrough to create favorable conditions. Therefore, it is the construction goal of knowledge base to realize information processing and structured storage of research results, which is convenient for research personnel to search and use.

The knowledge management system of university library think tank can be composed of two parts: The first is the structured knowledge base system, which conforms to the research needs of university library think tank, and gathers the expert experience knowledge at home and abroad. And the latest research results, international and domestic research literature and other knowledge of the system. The knowledge base collates and archives the electronic documents. Besides sorting out the author, title, publication, time of publication and other information of the documents, it also collates the subject participating experts and research project series according to the time sequence improves the knowledge management system of research results of think tanks. Among them, it is important to manage the research results of our school according to the project series, which can be completed through two ways: 1) collect the contents and output
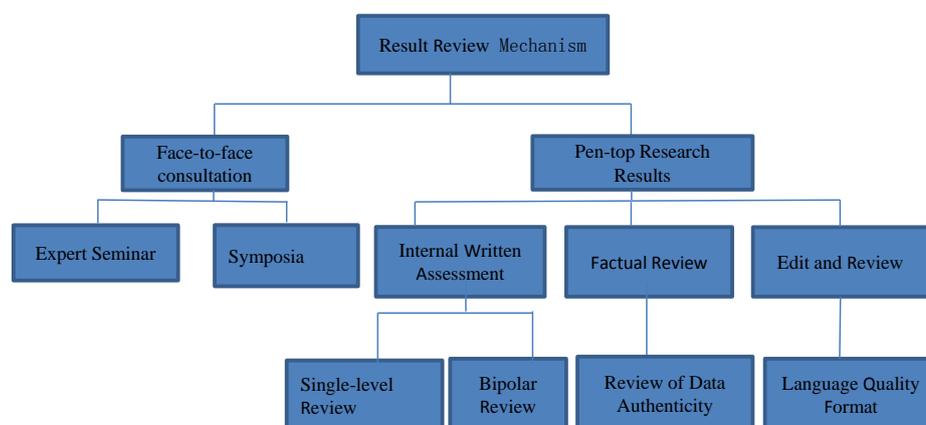

Figure 4. Flow chart of result review mechanism.

results of various activities completed by the project team, including project background, participants, Results of the project (confirmed by the decision-makers and the awards), presentations and materials for the completion of the project organization, participating academic meetings, symposia, work briefing meetings, special research workshops and seminars Materials, summary, participants and units, meeting time and theme, completion of research activities, system preparation, training, etc. 2) Storage according to the series of research projects. Mark the series items of our school, and realize the retrieval of the series items. The research experience of the project team is preserved in the form of documents, so that the research procedure and research method of the project can be traced, so that the university research team can pursue the research road of the former in the data, so as to continue to study in a deeper level. To establish favorable conditions by moving forward. Second, knowledge release and inquiry platform. The university library think tank can provide users with three kinds of online access channels: 1) self-built cloud search engine. It is fully open to the outside world and covers a wide range of other database resources. Provide multilingual support for visitors in content retrieval. 2) Cooperative database engine. Joint virtual directories can be opened through cooperation with China's Higher Education Documentation Support System (CALIS), the University Digital Library International Cooperation Program (CADAL) and the Regional Library Cooperation Alliance, and visitors can search through their search engines Information on all journals, books, chapters, electronic papers and monographs to the resource sharing platform. 3) Cooperative virtual thematic library. This kind of independent information resource base stores the research results in specific fields in digital way, which can fully improve the targeted dissemination effect of thematic resources and realize the associated storage and dissemination of thematic research results.

3.5. A Perfect Evaluation System: The Value of Think Tank Achievements

In the process of constructing the achievement evaluation system of university library think tank, the system and unity of the evaluation system should be considered comprehensively, the principles of comprehensiveness, maneuverability, refinement and objectivity and impartiality should be followed as far as possible, and objective data should be taken into account. Combine with subjective factors (Chen et al., 2017). In this way, the achievement evaluation system of university think tanks can be more scientific and reasonable, and a more reasonable evaluation method should be worked out for the indexes that cannot be quantified according to the refinability and operability, so that the operation of the evaluation system is consistent with the operation of the evaluation system The principle of fairness and justice.

There are two main ways to evaluate the achievements of university think tanks: Subjective evaluation and objective evaluation. Subjective evaluation is easy to incorporate personal subjective preference and emotion into the evalua-

tion process, so it can make the evaluation more reasonable through the combination of subjective and objective evaluation, and include the evaluation of the results of different types of think tanks. At present, the evaluation system of academic achievements of university think tanks is quite perfect, but there is no corresponding evaluation of public opinion-guided academic achievements and actual transformation achievements, so it is necessary to construct a reasonable evaluation method for this kind of achievements. The results were assessed. For example, the results of forward-looking think tanks and the results of think tanks that need time to be continuously verified should be different from those of quick results, the government should assign evaluation results of project applications, and construct a feasible evaluation method for different types of applications It also provides technical support for the evaluation of the achievements of university think tanks by means of data mining, data accumulation and visualization in combination with modern technical means, so as to make the evaluation of the achievements of university think tanks flexible And operability. Public opinion-led results of public academic discourse can be assessed through the combination of quantitative indicators and peer-to-peer expert assessments. The evaluation of the achievements of university library think tanks is not only for the evaluation of the value and academic quality of the achievements, but also for the recognition of the work of university researchers and a performance evaluation index. Pay enough attention to the evaluation of the achievements of think tanks in colleges and universities, so that they can be effectively combined with job performance evaluation and job title evaluation, and the achievements of think tanks that recognize scientific research personnel can be linked with various reward systems, which can effectively stimulate colleges and universities The enthusiasm of scientific researchers has further promoted the development of university think tanks in a better direction. Therefore, it is necessary to perfect the traditional academic evaluation, integrate the achievement evaluation into the performance evaluation system on its original basis, and continuously introduce or innovate some policies and mechanisms in line with the development of the achievement evaluation of think tanks.

4. Recommendations and Prospects

The construction of university library think tank is an important way to improve the core competitiveness of the library and an important embodiment of the transformation of research-oriented libraries. They want to play a greater role, we must consider under the guidance of innovation-driven strategy to organize the service system of the think tank, ultimately realize diversified collaborative innovation in scientific and technological development.

The integration of talent management mechanism and research management mechanism will help researchers break through the traditional closed innovation mode and promote the cooperation among universities, research institutions and researchers. The coordinated development of results management mechan-

ism and knowledge management mechanism is conducive to the realization of innovation, increasing the demand for scientific research and promoting the development of scientific research. Reasonable evaluation mechanism will optimize the collaborative innovation environment of information management, enhance the capability of scientific and technological collaborative innovation management, and enable the collaborative innovation process of information management mechanism to operate effectively. Therefore, the talent management mechanism, research management mechanism, result review mechanism, knowledge management mechanism and evaluation mechanism, five aspects should jointly drive the collaborative innovation of university library data management, and realize the benign combination of complementary resources and win-win results cycle. The university library think tank under the coordinated innovation idea guidance, must change the service consciousness constantly, develops the service train of thought, deepens the service content, takes "the demand" as the starting point, combines the corresponding service resources to realize the precise service. The knowledge service capacity of science and technology think tanks will be effectively expanded to play a greater role in national strategy, scientific research management and discipline development.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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