# Research on the Structural Elements and Operating Mechanism of Library Government Public Opinion Information Service Ecological Chain

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**Abstract:** [Purpose/Significance]Constructing the Ecological Chain of Library Public Opinion Information Service Can Significantly Improve the Level of Library Public Opinion Information Service, and Promote the Formation of a Benign Development Relationship between Government Functional Departments and Library Information Service Departments.[Methods/Processes]Taking the Modern Ecological Theory as the Research Tool, Starting from the Structural Elements, This Paper Analyzes the Ecological Chain of Library Public Opinion Information Service. [Results/Conclusions] the Ecological Chain of Library Public Opinion Information Service Consists of Five Elements: Subject, Ontology, Process, Method and Environment. from inside to Outside, It Forms a Related Relationship Extending from the Central Layer to the Middle Layer to the Outer Layer. through the Methods and Processes, It Realizes Forward Information Transmission and Feedback Information Transmission. the Operation Mechanism of Library Public Opinion Information Service Ecological Chain Constructed from Data Analysis, Librarian Level and User Demand Can Improve the Efficiency Level and Quality Level of Public Opinion Information Service.

## 1. Introduction

Actively developing public opinion information service can not only effectively expand library service functions, but also greatly enhance its public service capabilities, thus providing higher-level information services for all sectors of society, realizing scientific innovation of the library in the new era, and meeting the needs of all sectors of society for personalized and differentiated library services in the new era. Library public opinion service is different from traditional library services. Its greatest feature is that it is based on close connection with the government, relies on massive information and advanced digital technology to complete the collection, sorting, processing and pushing of public social attitude data, and builds a communication bridge between the government and the public, reflecting the social functions of the library. With the development of new media technology, public opinion service has shown very significant practical significance for governments at all levels to promote the openness of government affairs, guide the direction of public opinion, unblock public opinion communication, reshape the government image, and maintain the public credibility of administration, providing effective assistance for government affairs reform in the new era.

## 2. Concept of Ecological Chain of Library Public Opinion Information Service

In the information service ecological chain, the view generally accepted by the academic circles is that the information service ecological chain refers to the chain dependency relation of information flow among information producers, information service organizations and information users in the information service ecological system, centering on the information service organizations that are specialized in information transmission.[1] In the ecological chain of information interactive circulation, different types of information subjects are the most basic components, and the communication and transmission of information among different information subjects are the main activities of the ecological chain, while the chain dependency relationship in

the ecological chain is a multiple composite relationship of equality, symbiosis, interaction, reciprocity, cooperation, competition, etc. among different types of information subjects. Based on the above viewpoints, the library public opinion information service ecological chain can be defined as a chain structure system to ensure the scientific circulation of information in the information service ecological system, which is composed of three different types of information subjects, namely, the public, the library and the government, who participate in the production, collection, organization, transmission, provision and utilization of public opinion information. In the chain system mentioned above, the government entrusts the library, an information service provider, as an information consumer (information user), who will complete various information analysis activities according to requirements and feed back the results to the information consumer for use. As an information service provider, the main service content of the library is to take the public as the object to carry out comprehensive processing such as information collection, identification and analysis by means of diversified approaches and methods, and to form valuable information resources to meet the needs of the government through secondary processing of information content. As the main body of information production, the public mainly regards public opinions as their demands and expresses their demand for government public services through public opinions. However, in the ecological chain of library public opinion information service, the information producer can be not only the public, but also the relevant institutions and librarians in the library department that perform public opinion information service. The library plays a dual role in the ecological chain of public opinion information service. The library public opinion information service ecological chain belongs to the information analysis service ecological chain in type.

## 3. Structural Elements of Ecological Chain of Library Public Opinion Information Service

### 3.1 Main Elements of Library Public Opinion Information Service Ecological Chain

The main body of processing and using public opinion information is human, so the main element of library public opinion information service ecological chain is human. As for the ecological chain of library public opinion information service, its subjects are also divided into many different types according to their respective functions and functions, roughly including three types of subjects: (1) producers of public opinion information, i.e. the general public. (2) disseminators of public opinion information, i.e. the organizations and staff members in the library department who perform public opinion information services. (3) Consumers of public opinion information are relevant government departments and staff. When public opinion information flows interactively among different subjects based on a specific mechanism, an ecological chain of public opinion information services composed of different subjects will be formed. Therefore, to extend the ecological chain with the main body as the axis, there will be a main body with two different roles. For example, with the library as the axis subject, the organizations and staff in the library department that perform public opinion information service are the producers of public opinion information. However, with the masses of the people as the main body, the organizations and staff in the library department that perform public opinion information service are the disseminators of public opinion information.

### 3.2 The Noumenon Elements of Library Public Opinion Information Service Ecological Chain

The main element of the ecological chain of library public opinion information service is public opinion information. According to the ontological nature of public opinion information, it can be divided into four types: (1) public opinion of government affairs, that is, the attitudes and ideas held by the public after the public release of some government work information and information according to law. (2) policy public opinion refers to the attitude of the public when disseminating the national and regional laws, regulations, policies and other information. (3) public opinion of public service refers to the attitude of the public to all kinds of public services provided by the government. (4) Sudden public opinion, that is, the attitude of the public corresponding to relevant information of various sudden events (including natural disasters, public health, social safety,

emergency rescue and other events) in the process of dissemination.

### 3.3 Process Elements of Library Public Opinion Information Service Ecological Chain

According to the process of information transmission, the process elements of library public opinion information service ecological chain can be subdivided into the following five stages: (1) the first stage of information collection. Based on its own functions and service scope, the library's functional departments collect and sort out relevant information resources, and store relevant information in the public opinion information resources database with limited processes and standards, thus providing necessary basis for the development of public opinion information services and ensuring the quality level of public opinion information services. Information collection is the basic link of public opinion information service and the accumulation and storage of information resources. (2) the second stage of content editing. According to the needs of government public opinion information, various public opinion information resources are classified and sorted out, and then re-integration and re-processing are carried out according to the needs, so as to improve the readability and reliability of information content and facilitate the dissemination and use of information. (3) the third stage of information transmission. The integrated information resources will be transmitted to government administrative agencies and departments through specific channels according to certain work manuals to meet the government's public opinion information needs. (4) the fourth stage of information feedback. Based on scientific and effective information feedback, library public opinion information service can be continuously improved and optimized, providing important resources for the continuous development of public opinion information service, and at the same time, it will actively display the quality of public opinion information service. (5)The fifth stage performance evaluation. A series of comprehensive evaluation processes with value and technology orientation are designed for the internal connection, function and operation principle of the ecological chain of library public opinion information service. The scientific evaluation and analysis of the overall process of library public opinion information service will ultimately provide scientific guidance for the optimization and improvement of the information service mode and effectively enhance the operation efficiency of the ecological chain.

### 3.4 The Method Elements of Library Public Opinion Information Service Ecological Chain

In order to complete a stable information flow in the ecological chain of library public opinion information service, it is necessary to grasp the methods according to the characteristics of the ecological chain of library public opinion information service: (1)accurate coverage method. With the relevant government departments through specific channels, according to certain rules and regulations to transmit information, follow the principle of straight line transmission and path, through a specific transmission path, to achieve accurate coverage and effective transmission of information. (2) Personalized Service Law. Public opinion service is a process of carefully collecting, processing and outputting information with high quality. As public opinion transmission serves a specific group of people, personalized customization must be adopted to meet each other's needs. (3) Depth analysis. When carrying out public opinion information service, the library must start from the content and characteristics of information, select scientific and reasonable analysis methods and tools, sort and refine relevant information, obtain different information analysis results, and scientifically classify the information results to meet the information service needs of different subjects, so as to actively improve the information service level and provide positive assistance for the improvement of government public opinion management level.

### 3.5 Environmental Factors of Library Public Opinion Information Service Ecological Chain

As one of the constituent elements of the ecological chain of public opinion information service, the public opinion information environment is composed of all environmental elements related to public opinion information. Based on the scale and influence of the public opinion information environment, the public opinion information environment can be divided into internal environment and external environment[2].Among them, the internal environment is represented by all

environmental factors that are relatively small in spatial distance from the public opinion information subject and can directly and significantly affect the public opinion subject. It is the basic constituent element of the ecological chain of public opinion information service, specifically represented by information resources, information technology, laws and regulations, policies and systems, information culture and other elements. On the other hand, the external environment is relatively large in spatial distance from the public opinion information subject, which can indirectly affect various factors of the information subject, and is embodied in macro-economic environment factors.

## 4. The Interrelationship of Elements in the Ecological Chain of Library Public Opinion Information Service

According to the five elements of public opinion information subject, ontology, process, method and environment, the ecological chain of library public opinion information service can be described as a related relationship extending from inside to outside. (1) the central layer. The subject of public opinion information, that is, all kinds of information people, is the center of the system of public opinion information service ecological chain, specifically responsible for the collection, collation, transmission and use of public opinion information. (2) Middle layer. The public opinion information ontology, which directly affects the existence of the information subject, is the middle layer, and it establishes a platform for the interconnection between the public opinion information subjects, the public opinion information subjects and the public opinion information environment. (3) Outer layer. All kinds of internal information ecological factors in the public opinion information environment and all kinds of external natural and social environmental factors on which the public opinion information service ecological chain depends, which can provide the environment for the establishment, operation, development and evolution of the public opinion information service ecological chain, have become the outer layer of this system.

In the ecological chain of public opinion information service, the information subject and the information environment show a very significant mutual influence and interrelation. They are developing together in an organic whole, fully ensuring the accuracy, standardization, reliability and comprehensiveness of public opinion information, and realizing the production, processing, dissemination and utilization of public opinion information. Actively and effectively meet the needs of government functional departments for relevant public opinion information, so as to improve the scientific level of various work of relevant functional departments, form an efficient and reliable organic whole on the basis of good interaction between the two sides, and ensure the sound development of public opinion information services.

For the ecological chain of public opinion information service, in order to realize the three functions of system analysis, service and feedback, it is necessary to ensure the normal circulation of public opinion information among the central layer, the middle layer and the outer layer. The concrete manifestation of such information flow is that information resources share, spread and utilize on the basis of information processing through specific methods and processes in the process of communication and interaction among different information subjects. Therefore, in the process of public opinion information circulation in the ecological chain of library public opinion information service, the information interaction of different public opinion information subjects presents a significant two-way feature, realizing two-way circulation through forward information transmission and feedback information transmission.

## 5. Operating Mechanism of Library Public Opinion Information Service Ecological Chain

For the library as a service subject, studying the operation mechanism of the ecological chain of public opinion information service can ensure that the combination of various structural elements of the ecological chain of public opinion information service can play the best level. The influence of the operation mechanism on the behavior of things can be simply summarized as guidance and restriction, and the specific content is the guidelines and relevant guarantee and management

mechanisms that various subjects need to follow to carry out various activities under the influence of each other. The operating mechanism is a concentrated expression of internal and external factors and their interrelationships that affect behavior and results. Specifically speaking of the special relationship of library public opinion information service ecological chain, the operation mechanism can be understood as a dynamic change process in which all information related subjects interact with each other to ensure specific information service results. Its purpose is to realize the functional functions of different subjects and complete specific information service tasks.

The research on the operation mechanism can guide the public opinion information service department and its service personnel to discover various problems in the operation process of public opinion information service in a timely manner, and carry out targeted treatment with scientific methods as tools to ensure the scientific operation of the system, thus effectively avoiding the occurrence of consequences such as system imbalance and failure, and ensuring the stable operation of the library public opinion information service ecological chain. The operation mechanism of the ecological chain of library public opinion information service includes power mechanism, coordination mechanism, competition mechanism, sharing mechanism, feedback mechanism, evaluation mechanism and value-added mechanism [3]. The following three aspects can be taken into consideration when constructing the operation mechanism of the library public opinion information service ecological chain:

(1) Data analysis. Under the background of new media and information technology, the focus of library public opinion information service has changed. Collection of public opinion information is no longer a difficulty in library public opinion information service. How to obtain the required information from the large-scale information and complete the mining and analysis work has become the core task of library public opinion information service [4]. Through the public opinion monitoring system, the collected and summarized information is scientifically processed, and preliminary research is carried out by using technologies such as format conversion, automatic clustering, entry identification, etc. Then public opinion information service personnel take the information results meeting the requirements of keywords as basic materials for further analysis. When determining the basic materials, it is necessary to comprehensively consider many factors to determine the scientific content of subject headings. The main contents of the information analysis work are divided into five aspects: information source monitoring, dissemination statistics, dissemination surface monitoring, emotional attitude analysis and public opinion development trend [5]. Therefore, integrating data analysis into the construction of library public opinion information service ecological chain operation mechanism can intuitively find problems.

(2) Librarian level. As the information subject of public opinion information service, librarians' working ability will directly affect the service quality. Therefore, the professional ability of librarians must be fully guaranteed to ensure the quality of public opinion information service. The advantages and disadvantages of the operation mechanism can be measured by comprehensively scoring librarians' qualifications, academic qualifications, working years, professional titles, average time required for problem solving, user satisfaction, number of work results, etc.

(3) User needs. Whether it can meet the needs of users and can intuitively and accurately describe the public opinion information service capability of the library. In the ecological chain of library public opinion information service, information service users are the relevant government departments. Therefore, whether the decision made by the government using the public opinion analysis report provided by the library is to guide the public's social attitude towards the correct socialist values is the way to judge whether the problem has been solved. In the construction of library public opinion information service ecological chain operation mechanism, the user demand index can be quantified and standardized operation can be realized through scoring to ensure efficient and rapid problem solving.

## 6. Conclusion

Introducing the concept of modern ecology into library public opinion information service can significantly improve the level of library public opinion information service, thus being conducive

to the formation of a jointly promoted and mutually coordinated benign development relationship between government functional departments and library information service departments, and realizing a more comprehensive, reliable, efficient and convenient information service ecosystem. In order to improve the efficiency level and quality level of public opinion information service, thus providing a strong guarantee for the formation and development of a harmonious society.

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