

On the Literature Retrieval, Information Retrieval and Intelligence Retrieval

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Abstract: With the development of knowledge economy, new knowledge and products emerge in an endless stream, which is also the manifestation of the improvement of social knowledge level. However, people tend to hold different views on some brand new knowledge or things. In order to help people understand conveniently new things through various ways, literature retrieval, information retrieval and intelligence retrieval are analyzed in this paper to promote the further improvement of social knowledge level.

1. Introduction

Nowadays, the use of literature retrieval, information retrieval and intelligence retrieval on various publications in the library is really confusing, which seriously affects the efficiency of paper search and hinders the research and development of academic issues. Therefore, if we want to promote the development of academic research, we must distinguish and make good use of literature retrieval, information retrieval, intelligence retrieval and other retrieval methods.

2. Literature Retrieval

2.1 Definition of Literature Retrieval

Literature retrieval refers to a way that people find out the type of literature they need in an orderly literature collection by using retrieval tools or retrieval systems in a scientific way. Literature retrieval is an important way in academic exchange. Using literature retrieval for information search not only improve the efficiency of development and utilization of information, but also help academic researchers learn from previous research results in the academic research process so as to avoid repeated research and then improve academic efficiency, level and the whole work progress of academic research.

2.2 Types of Literature Retrieval

Literature retrieval is to find some literature that meets the specific needs from numerous literatures. According to the different search objects, literature retrieval can be divided into three types: bibliographic retrieval, fact retrieval and data retrieval. In terms of bibliographic retrieval, bibliographic retrieval mainly refers to a kind of retrieval type that regards bibliography, introduction, abstract, title and others as the retrieval objects. That is to say, all retrieval types that search for literature through a certain subject belong to bibliographic retrieval. From the aspect of fact retrieval, fact retrieval mainly refers to the retrieval type with fact as the retrieval object. That is to say, fact retrieval needs to find out some facts in the literature. So fact retrieval is also called event retrieval. In the fact retrieval, materials recording these facts need to be found out, and academic researchers need to compare and analyze these materials. In terms of data retrieval, data retrieval mainly refers to the retrieval type that depends on some special data retrieval types, such as calculation data, calculation formula, and others [1].

2.3 Methods of Literature Retrieval

2.3.1 Direct Method

Direct method is to directly use retrieval tools for literature retrieval, and is also the most

commonly used way in literature retrieval. Direct method of literature retrieval can be also divided into: forward search, reverse search and spot check. According to chronological order, the forward search method can search the system literature of some subjects from far to near, so it is suitable for large types of literature retrieval. In accordance with the time sequence, reverse search method can search literature from near to far, so it is suitable for finding the latest literature of a certain subject and obtaining the latest data. Spot check is mainly to select the most important information for a subject to search.

2.3.2 Retrospective Method

Retrospective method is not to use the common way to search literature, but to search the references listed at the end of a certain literature one by one, so as to expand the information source of the literature. Moreover, using this method, we can search the references again from the references to snowball the scope of literature search, until we search the types of literature that we need completely.

2.3.3 Comprehensive Method

Comprehensive method is the combination of direct method and retrospective method, also known as circular method. This method first uses the conventional way to search the literature, and then expands the search content and scope according to the reference attached to the end of the literature. The comprehensive method has the advantages of both literature method and retrospective method, so it can be considered to use the comprehensive method to search the literature as appropriate [2].

2.4 Development of Literature Retrieval

Literature retrieval plays an important role in promoting social progress and broadening vision of people. In order to further facilitate literature retrieval and the rapid development of science and technology, literature retrieval will develop towards intelligence, visualization, diversification, friendliness, simplification and multilingualism.

3. Information Retrieval

3.1 Definition of Information Retrieval

Information retrieval refers to a process of information storage and acquisition. General users' demand for information is subjective, so users need to carry out information retrieval. The stronger the users' awareness of information retrieval is, the stronger the ability of information retrieval they have. Information retrieval system is mainly a kind of information search, processing and handling degree system established according to the information retrieval needs of users, in order to serve the needs of users [3].

3.2 Research Content of Information Retrieval

Information retrieval mainly includes retrieval language research, database research, description research, and indexing and organization research. Retrieval language research is to select and retrieve the language related to literature from natural language to represent the controlled language collection of literature and information. The main content of the research includes keywords, subject words, code representation and others. Database research refers to the collection of multiple interrelated information data, which is essential for information retrieval. The content of database research mainly includes database construction, information collection, literature screening, copyright protection and others. The research content of description method includes the analysis, research and record of the form and content characteristics of information and literature, also including the format, standard and criterion of literature collection. The research content of indexing and organization method is mainly to analyze and screen the information content, and use accurate identification to reflect the accurate literature resources.

3.3 Development Direction of Information Retrieval

With the continuous development of information technology and academic research in China, information retrieval will gradually become intelligent, diversified, simplified and multilingual. The development of information retrieval will be intelligent. The intelligent information retrieval system is mainly composed of two parts: literature base and intelligent interface. Its intelligence is mainly reflected in the search engine's ability to analyze and reason. Search engine can analyze the characteristics of users according to their needs and screen information for users. The diversification of information retrieval development mainly shows that information retrieval can not only use keywords for retrieval, but also use pictures and even voice for retrieval, so as to facilitate user's literature retrieval. Simplification mainly shows that with the development of search engines, translation machines and automatic abstracts, it will be more convenient for users to use information retrieval. Multilingualism is mainly an information retrieval system dedicated to multilingual development, so as to provide information retrieval services for users around the world [4].

4. Intelligence Retrieval

4.1 Definition of Intelligence Retrieval

Intelligence retrieval is to collect, organize and store information in some ways, and then provide relevant information according to the demands of users. Intelligence retrieval is also called information storage and retrieval. For users who need some information, intelligence retrieval is only a part of it. After finding out the information, they need to analyze it and conduct other work for it. Thus, the definition of intelligence retrieval can be concluded from broad sense and narrow sense. In the broad sense, intelligence retrieval includes information storage and search. In the narrow sense, intelligence retrieval only refers to information search [5].

4.2 Classification of Intelligence Retrieval

4.2.1 Classification According to Search Objects

The classification of intelligence retrieval according to the retrieval objects is almost the same as the classification of literature retrieval. Classification of intelligence retrieval is also divided into bibliographic retrieval, fact retrieval and data retrieval and others. However, intelligence retrieval also includes the full-text retrieval of literature. The full-text retrieval of literature can search out the full-text of literature related to relevant information mainly through intelligence retrieval.

4.2.2 Classification According to Technical Methods

According to the technical methods, intelligence retrieval can be divided into four ways: manual retrieval, mechanical retrieval, photoelectric retrieval and computer retrieval. Among them, manual retrieval means that users manually search the printed products that have been printed, and then judge these products. That is to say, manual retrieval allows users to consider while searching, but the efficiency of this retrieval method is very low. Mechanical retrieval refers to the use of retrieval marks or retrieval devices for intelligence retrieval, which greatly improves the efficiency of retrieval. Photoelectric retrieval refers to turning the retrieval mark into black-and-white matrix or bar code and using photoelectric effect for retrieval, which further improves the retrieval efficiency. Computer retrieval refers to the transformation of literature information into binary code information that can be read by computer. Then binary code information will be stored on magnetic carrier, and then will be searched and output by computer program. This kind of intelligence retrieval method has the highest efficiency, and computer retrieval can be divided into offline retrieval, online retrieval and multi-computer network retrieval.

5. Conclusion

In a word, if we want to promote further improvement of the level of academic research in China,

we must analyze and research on literature retrieval, information retrieval and intelligence retrieval well, so as to provide a good retrieval method and retrieval environment for scholars, to improve the efficiency of academic research, to speed up the process of academic research, and to provide conditions for China's academic research to a higher level.

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