Analysis of Information Retrieval Teaching Against the Background of Big Data

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ABSTRACT

In the era of big data, information is exploding. The education and development model for college students are also undergoing certain changes. In response to the current trend, the concepts and methods of information retrieval teaching are re-researched and explored, and new data concepts are used to make the information as a resource that can be used efficiently and make students realize the importance of information retrieval for the quality training of college students.

Keywords: *big data, information retrieval, full data model, correlation, information quality*

I. INTRODUCTION

With the development of society and technology, we have entered the era of big data. As a new concept and new technology, big data has brought about new changes in many fields. The application of big data has brought fundamental changes to society, not only promoted the maximum sharing of information, but it can also perform faster and larger-scale data processing in multiple fields to get the information and results we want. In this case, we need to update our concepts and have a completely new understanding of information retrieval. At the same time, we must follow the trend of the times, apply data concepts to the teaching of information retrieval, and make college students realize the importance of information retrieval. We also need to use information retrieval to improve their information quality and change their thinking, value data concepts, and use information retrieval, which is an important role and significance.

II. INFORMATION RETRIEVAL IN THE CONTEXT OF BIG DATA

"Big data is a revolution," said Gary King, a professor of sociology at Harvard University. "Huge data resources have started the process of quantification in all fields, including academia, business, and government." [1] This kind of quantification makes all information become available data resources, which greatly enriches the content of the database. And with the development of the times and technology, this kind of information resources will be more and more huge, involving more and more fields, in which the potential value of information will also be improved. It can be said that in today's information society, information has become an immeasurable treasure. The mastery of

information resources determines your cognition, as well as the level and development space of your field. This makes us have to have a correct understanding of information. Information is not only a tool to expand our vision, but also a ladder for social progress. No matter the development of the country or the improvement of the personal research field, we need to pay attention to information and make accurate use of it. A huge amount of information is good, but there must be information we don't need. Information retrieval becomes particularly important at this time. How to screen the large number of information and find useful information is our problem to solve. Therefore, against the background of big data, information retrieval becomes more and more important. It can be said that it is a necessary skill for our contemporary people and plays an important role in our study and research.

With the application of big data technology, information storage has advantages. Whether it is information storage space or update speed, there are new changes. It is more and more important to adapt to the current situation. The era of big data is an era of high information sharing. People are sharing and ingesting information all the time. In many cases, people's unconscious browsing of web pages is actually an act of information acquisition, but this kind of information acquisition is unconscious and purposeless, just to meet our individual thirst for knowledge. This kind of information acquisition behavior is just a kind of simple expansion of vision, let oneself have a cognition of the information at a certain time, and can not really play the value of information. Therefore, while big data provides us with convenience, we need to conform to the trend of the times, rather than just use the concept of reading and newspaper to obtain information. Therefore, we need to have an information concept, and combine this new concept with the

concept of big data, so that we can completely update our thinking concept, not limited to the traditional information awareness. We should make full use of the new opportunities provided by big data to break through the traditional information field, and achieve new changes in both concept and technology.

Against the background of big data, the amount of information is increasing rapidly, and the update speed of information is accelerating, which accelerates people's desire for information. We are all submerged in the ocean of information, and we are all eager for new information all the time. The information has penetrated into all aspects of our lives. No matter what kind of career you do, no matter you are studying or working, we can't leave the access to information. In the face of the vast ocean of information, if we want to swim in the ocean and make the most efficient use of such huge information resources, we must master the skill of information retrieval, take information as the object, find more reasonable and efficient retrieval methods and ways, so that we will not fall into a dilemma surrounded by information. Information retrieval can let us find out the information we want from the huge information collection, which is a conscious and purposeful acquisition of information. Using information retrieval technology, we can effectively develop and use a variety of information resources, not only to get the most comprehensive information as much as possible, but also let us use information more accurately. Information retrieval is an effective way to develop information resources. It can be said that in the era of big data, information retrieval is a skill we have to master.

III. TEACHING APPLICATION OF BIG DATA THINKING MODE

We need to understand the existing form and development trend of information in the context of big data. The era of big data is an era in which everything can be quantified, including information. Big data will transform information into data for storage and integration, forming a huge database. If we want to use big data in teaching and make students realize the importance of information data, we need to have an accurate understanding of big data. We can "understand big data from two aspects of data itself and data processing technology, so understanding big data can be divided into narrow sense and broad sense: narrow sense big data refers to the structural form and scale of data, and it is understood from the literal meaning of data; broad sense big data includes not only the structural form and scale of data, but also the technology of data processing." [2] That is to say, big data, as a new concept and technology, has great potential. With the development of big data, the information will gradually become more and more

comprehensive and realize the sharing of the whole people. Therefore, in this trend, it is necessary for us to take the thinking mode of big data into account in the teaching of information retrieval. This kind of data thinking will add new vitality to our teaching and achieve innovative progress in teaching. Against the background of big data, there are two main thinking modes, one is the full data analysis mode, the other is the data correlation analysis method. We can use these two thinking modes in the teaching of data retrieval.

The whole data analysis model is based on all sample data, that is to say, the sample and the population are equal, compared with the traditional random analysis method. The whole data analysis model implements the concept that the sample is the whole, and discards the traditional random sample research. The whole data analysis mode is no longer limited to small-scale data analysis, but takes all data as a whole, emphasizes the importance of each data, makes full use of each data to analyze and study the whole, does not neglect any detail, and has obtained comprehensive and accurate cognition since then. In the teaching of information retrieval, teachers should first have such a concept, and then have a new understanding of information retrieval. In the process of information retrieval, we should not only obtain the key information, but also pay attention to the amount of information. The more comprehensive the information and data are collected, the broader the cognition of the problem will be. We use the full data analysis mode to have an overall perception of things, based on which we can control things macroscopically. It can be said that "the whole data analysis mode is an ideal research method, which can not only ensure the comprehensiveness of data possession, but also avoid the misunderstanding brought by the fragmentation of data." [3] The whole data analysis mode emphasizes the amount of data, that is to say, in information retrieval, we should collect all information data as much as possible, and here we can easily do it by using big data, which is the advantage and convenience that big data provides for information retrieval. We can make full use of data technology to carry out information retrieval and use data concepts to make information retrieval more comprehensive and organized. Therefore, in teaching, we should convey this idea to students, let them realize that information is a kind of valuable resources, in learning or research, we should pay attention to the overall possession of information, so that we can always know the development degree of things, not to narrow our information concept.

Correlation analysis of data refers to the method of analyzing and studying problems by using related data, which is opposite to causality. "It's an important way for people to know and control things, and then make predictions and judgment to find all kinds of real correlation relationships from a super large amount of

data. In the era of big data, new analysis tools and ideas can let us find many connections between things that were difficult to find or not noticed before. Therefore, it's an important task to vigorously carry out correlation analysis in the era of big data." [4] That is to say, the correlation of data pursues the cognition of the result of the phenomenon of things, and focuses on the prediction of the development of things. The key to data correlation analysis is "what", not "why". This is different from our traditional thinking. This kind of data thinking pulls us out of causality. This kind of thinking transformation will let us find out the aspects we didn't pay attention to before, which brings a new research perspective and opens up a new vision for information retrieval. This kind of reverse thinking can make us not limited to the reason why a large amount of information exists, but how we should use the information and what kind of results information retrieval will bring to us. In teaching, teachers should make students pay attention to the relationship between information and data, and be able to integrate information into fully utilized information resources based on their own cognition. It is particularly important for teachers to let students learn to use information retrieval to collect relevant data. When we do information retrieval, we find the key points of information, and on this basis to find the information related to it. In this way, students can collect all kinds of data related to the research, analyze problems in the connection, and make information prediction. This kind of cognition of relevance will greatly broaden students' thinking and open the perspective of students' analysis. If the whole data analysis mode focuses on letting students know the importance of a comprehensive collection of information, then the correlation analysis method of data focuses on letting students know how to use the huge data collected.

IV. THE INFLUENCE OF INFORMATION RETRIEVAL ON COLLEGE STUDENTS

Information retrieval focuses on the cultivation of students' ability and quality. In the process of using information retrieval, the most important thing for students is to improve their information quality. "Information quality refers to having a strong sense of obtaining information, mastering the technology and method of information retrieval, and having the ability of information identification and utilization. The concept of information quality was first proposed by Paul Zurkowski, President of the American Information Industry Association, in a report to the United States government in 1974." [5] That is to say, information quality is not only a kind of basic quality, but also a kind of ability quality. As a basic quality, college students should first have an information consciousness and information-based thinking in concept. Against the background of big data, people's access to information has become broad, and information has penetrated into every corner of our lives, affecting us all the time. On this basis, we cannot ignore the importance of information acquisition. Therefore, in today's information society, college students must take information quality as their basic quality to cultivate and improve. As a kind of ability quality, college students should first have an information ability, which includes information retrieval, identification, and analysis, organization and utilization. That is to say, information quality includes students' ideas and ability to practice. In the study of information retrieval, students should not only attach importance to the value of information, but also have the ability of information screening and utilization. This kind of all-round information quality training is conducive to the improvement of students' professional ability in their study and life.

Everyone has a potential desire for information, which affects our thinking and action all the time. In the study and life of college students, it is inseparable from the acquisition of information. Because of the particularity of this profession, students should screen and collect information whether in class or in class. Information retrieval can provide students with an effective way to accumulate information. Students will have a lot of information every day, but this information are not all valuable, which requires students to have the ability to filter and refine information. Popularly speaking, students should be able to "extract the essence and remove the dross" in the face of huge amounts of information. This is inseparable from information retrieval. It can be said that information retrieval is a skill that students should use at any time. Information retrieval is a necessary ability for college students to improve their learning efficiency, expand their vision and improve their professional quality. In the context of big data, information retrieval can ensure that we are not overwhelmed by the data, and will open up a path for us in the huge data. Therefore, in the era of big data, college students must update their ideas, keep up with the trend of the times, and pay attention to the importance of information retrieval and data concepts, so that they can swim in the ocean of information.

V. CONCLUSION

In the context of big data, we need to have a data-based thinking mode, regarding the database as a collection of data, filter out the data information we want through information retrieval and then make use of it. Teachers should make full use of the correlation between data in the teaching of information retrieval, and pay attention to the application of the whole data model, so as to make a breakthrough in teaching methods. Students should pay attention to improve their information quality, establish information concepts, and

apply information retrieval to their study and life in order to get their own improvement.

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