Construction and analysis of campus knowledge payment platform under the wave of big data

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Abstract: With the increasing popularity of the network information age, "big data" emerging at the historic moment, has become the hottest IT industry vocabulary. In this context, the application of big data technology plays an important role in the construction of campus knowledge payment platform. Therefore, this paper is dedicated to studying the technical support for the construction of campus knowledge payment platform and the influence of big data on the platform construction, so as to promote the platform technology upgrade and optimize the platform management.

1. Introduction
With the rise of cloud computing, social media, mobile Internet, a large amount of fragmented data emerge. Network sharing and openness make everyone can obtain and store information on the Internet, but because there is no quality control and management mechanism, information resources, the good and bad are intermingled, formed a complicated world of information. How to find suitable information in a variety of resources has become a problem most people are distressed about. Because of its paid characteristics, knowledge content on the knowledge payment platform is more professional and personalized, providing targeted services for customers.

In addition, at the current rate of data generation, 2.5 terabytes of data are generated every day. A large amount of data requires the platform to continuously improve the "data capability", that is, the ability to process a large amount of data at high speed, responsibly and sustainably, so as to give users an extremely fast, efficient and accurate user experience. Big data technology is the ability to quickly obtain valuable information from various types of data, which is exactly what the campus knowledge payment platform needs.

Domestic research on the "knowledge payment" platform is mainly based on the well-known platforms such as "Dedao" and "Himalaya" to discuss its development mode, existing problems and future trends, etc., and there is no payment platform that takes college students as knowledge creators. However, under the traditional mode of knowledge sharing, there are often problems such as resource dispersion, low efficiency, low information quality and lack of effective supervision mechanism. With the application of big data technology, the platform can well grasp the needs of users, integrate platform resources, accurately locate and provide satisfactory services.

2. Research status at home and abroad

2.1 domestic research status
Wang chuanzhen proposed that "Fenda" and "Dedao" are knowledge dissemination models that rely on open content communities, screen out more valuable information, and provide online consultation, online courses, information sharing and other content services to the Internet by individuals on the
basis of payment \cite{1}. Payment model based on knowledge in certain principles of economics. Zhang chunxiao pointed out that the knowledge payment platform connects the knowledge sharer and the knowledge demander, and the platform improves the efficiency for bilateral users. Knowledge consumers are willing to pay when the amount of payment is less than the cost of time (energy) to obtain specific knowledge, and knowledge sharers can benefit from getting access to the platform to share knowledge \cite{2}. Sun xiaozhen came to the conclusion that college students generally hold an attitude of recognition towards knowledge payment and have a wide demand for paid knowledge, and that paying will become an important means for college students to acquire knowledge \cite{3}.

2.2 foreign research status
Foreign concept of "knowledge paid" appear earlier. In the field of education, foreign knowledge sharing is embodied in MOOC (Massive Open Online Course) online course mode in colleges and universities. In addition, well-known paid professional skill sharing platforms include Coursera and Skillshare, etc. Quora has also added a paid video question-and-answer function, which integrates social and knowledge payment, and is relatively complete. However, it is quite different from the large-scale purchase of high-quality knowledge resources under the background of network payment pioneered in China.

3. Technical support of big data knowledge payment platform
Big data technology is used to improve the management mode of platform data and the quality of platform data, so as to achieve more economic benefits.

3.1 database integration technology
Data integration technology can integrate data into unrelated data systems through unified application standards and data structures, so that each system or different users can effectively acquire data. Therefore, data integration technology can be used to unify data platform and interact with various heterogeneous database data.

3.2 graphical user interface
Compared with the character command language interface based on symbols, the graphical interface based on visual perception has certain cultural and language independence, and can improve the efficiency of visual target search \cite{4}. In the visual stage, computer graphics technology is used to give full play to the potential of image perception and image thinking, which improves the efficiency of information transmission \cite{4}. Graphical user interface can improve the comfort of users, increase the artistic and ornamental value of the platform.

3.3 advanced server structure
This structure is composed of data server, application server and client, which has obvious advantages. It can make the sharing of platform resources convenient, save cost and improve system performance \cite{5}.

3.4 object-oriented technology and programming language
Platform construction is mainly based on Java language, DreamWeaver platform and MySQL database.

4. Function module design of big data knowledge payment platform
Campus "knowledge payment" platform is mainly divided into three modules
4.1 Subject guidance area
It is divided into different colleges, different majors, and different disciplines. It integrates the information of students who have excellent academic performance and counseling ability in different disciplines on the platform and uploads it to the database for users to search.

4.2 Experience exchange area
There are four sections: postgraduate entrance examination, postgraduate recommendation, overseas study and work. There are excellent postgraduate admission institutions, overseas study institutions and job-hunting units. Information profiles of college students with relevant experience (including only publicly available information) are uploaded to the database for users to search and contact.

4.3 Learning materials trading area
Learning materials include study notes, used textbooks and other learning materials. Upload the version and pricing information of the materials to the database for users to select transactions.

5. Implementation ideas of big data knowledge payment platform

5.1 Big data technology deals with massive data resources
Big data processing and analysis is becoming the node of the fusion application of the new generation of information technology. Platform users will constantly generate big data when uploading resources, searching information and consulting services. Cloud computing provides storage and computing platforms for these massive and diversified big data. Through the management, processing, analysis and optimization of data from different sources, the results are fed back to the platform, which will create huge economic and social value.

5.2 Big data technology excavates users' needs
Analyze the massive data of the platform, including the resources provided by knowledge producers and the types and contents of knowledge sought by knowledge consumers, so as to find the laws in the data, explore the needs of both parties, adjust the operation mode of the platform, and improve the repurchase rate and satisfaction of the knowledge payment platform.

5.3 Big data technology becomes the core competitiveness of the platform
The application of big data will become a key factor to improve the core competitiveness of the platform. Decisions in all walks of life are changing from "business-driven" to "data-driven", and knowledge payment platforms are no exception. The analysis of big data can enable the platform to grasp the market dynamics in real time and respond quickly, making more accurate and effective
marketing strategies. It can help the platform provide more timely and personalized services for knowledge consumers.

6. Summary
Through the application of big data knowledge payment platform, it can provide convenient services for knowledge producers and consumers. It is also advantageous for the platform side to manage massive data, reduce time cost and improve efficiency. Then, it can meet the needs of platform users, and enhance the competitiveness of the platform.

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