Discussing the New Transformation Pattern of Block chain from the Perspective of Academic Interaction

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Abstract: “Blockchain + Education” is a technology-oriented innovative application model derived from the appropriate development of the education industry in the process of heterogenic cultivation. At the same time, China's market operation requires highly educated talents. The problems of “forgery of school membership” emerge endlessly, and indirectly derives “black education institutions”, which causes information inquiry trouble for postgraduate students and those who needs to go abroad. In recent years, the main innovative point for the educational model is to induce students' innovative ideas, while college students lack the practical applications of innovation consciousness, which is reflected to the rigorous academic papers of college students, and even the phenomenon of plagiarism and fraud is not uncommon. The protection of rights which works in the academic fields such as verification and privacy seems to be impossible. The main characteristics of the Blockchain are: openness, information enforceability, and anonymity. This paper starts from the educational perspective and combines the publications of Chinese authors which are in the world's three major journals, <Nature>, < Science> and <Cell>. The results of “Think Tank Data” analyze the application status of “Blockchain+” in universities at home and abroad. Strictly controlling the forming management of the "brush coin" consciousness, embracing the technology with the attitude of scientific development, paying attention to the Block chain technology to the benign incentives of the education industry, and discuss the management optimization method of "Blockchain + education" with scientific verification methods.

1. Introduction

After many years of higher education, the thesis is an important indicator of achievement evaluation. Most college students get the graduation certificate successfully. Most of the college students' ideology for graduation thesis is often copied and pasted from the relevant database. Analyze the publication status of high-level academic papers in famous universities in China, and combine the application status of “Blockchain + education” in well-known colleges, from the theory of Blockchain technology combined with reality, from student records, academic fields, educational resources, and grind or study aboard. A series of guidance can be put forward. The European Commission's report "The Blockchain in Education" has a preliminary application theory in the field of education. It mainly builds a unique access database, and learns the experience-oriented personal credit flow data, which can solve the problems of global academic forgery. Blockchain technology can also be embedded in smart contracts based on the internet education platform, giving valid credentials which based on learning materials transactions. For off-campus educational institutions, Blockchain technology can effectively break the current situation which educational resources are monopolized by schools. Blockchain can form a mass-participating teaching system, which not only helps students to learn specifically, but also

examines participate which given by colleges and universities. The learning results promulgated by the promulgation and educational institutions prove the interactivity, which can help the employer to judge whether the student has the knowledge required for the position or not.

2. The "high-level perspective" of the current academic field in China's universities

“Think Tank Data” released the publications of “Nature”, “Science” and “Cell” in Chinese universities on January 29, 2019. All the above three publications are international top journals, and the number of publications can basically represent the level of academic research results in China. From a high-level perspective, we can understand the areas covered by advanced knowledge education. China has advocated balanced development over the years, and the concept of high-level educational communication provides an opportunity for the experiment of “block chain” technology.

2.1 High academic level distribution

As shown in figure, Chinese scholars published the rankings of "Nature", "Science" and "cell" in the order of the first authors; Chinese Academy of Sciences, Tsinghua University, Peking University, Fudan University, Shanghai Jiaotong University and Zhejiang University. Among them, the number of publications of the Chinese Academy of Social Sciences is far ahead, with 10 articles published in "Cell", 16 articles published in "Nature" and 9 articles published in "science". According to the data, China's top educational resources are concentrated in the capital Beijing, accounting for 60% of the nation's quality education resources. The current government guidance has expressed the concept of “balanced development”. Therefore, after the block chain technology is combined with the internet, it can theoretically reduce the educational gap between regions and regions, build an education platform based on block chain technology as a contract mechanism. It can effectively solve the current situation of regionalization of higher education in China. Relying on the distributed ledger technology of block chain, it can intelligently track all published opinions, protect the mental work results of users based on block chain technology platform from the root, effectively prevent scientific results from plagiarism, and help on stimulate the innovation of educational models in colleges and universities. Promote the creation of original ideas, invest more quickly in the innovation of university education, and quickly accomplish the new personal training program.

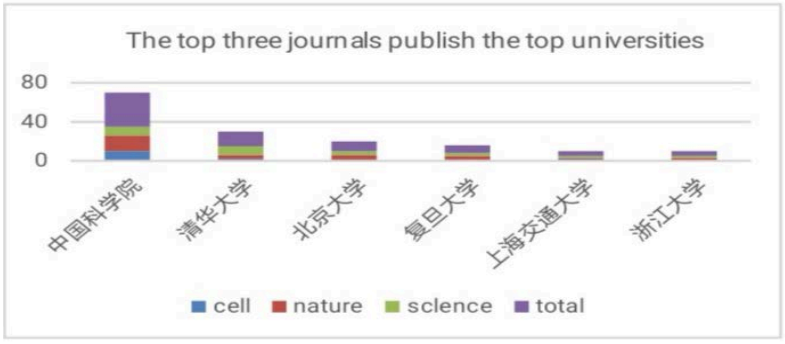

Figure 1. Publications of the top universities

2.2 Author's cooperation

As observed in figure, the publication of top-level world publications in an exclusive manner is only 9% of the total. Most universities publish international top-level publications in almost the same international and domestic way. From the perspective of "high-level" academics, it is found that if the college education industry wants to make major breakthroughs, it should accelerate the integration of the characteristics of the various colleges and universities. In the context of “block chain + education”, the application of the block chain can establish the process mechanism of the virtual currency. Students can adopt the “virtual coin” method because of the benign behaviors generated by the

learning needs, such as question and answer method, answering questions. The incentives can stimulate the participation of users under the “block chain + education” platform, constitute a platform contribution indicator guided by benign incentives, and generate an ecological circulation system with the core incentive mechanism of virtual currency.

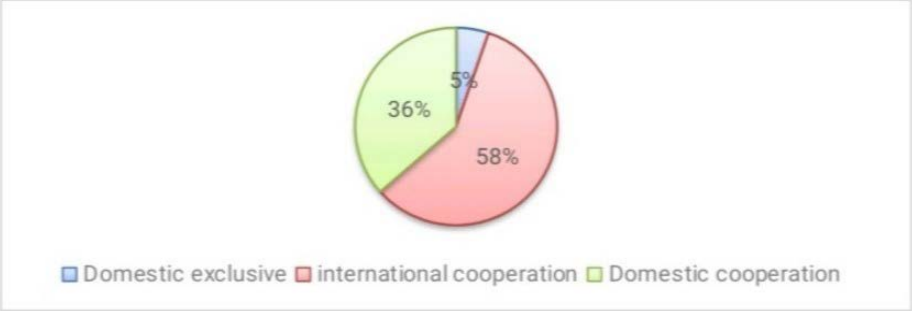

Figure 2. Issue of cooperation

2.3 Educational trend of “block chain+ education”

According to Coin Schedule’s records, there are already two internet-based digital currency distributions. Three online education projects entered the recruitment phase in March 2018, and two projects will officially begin to be recruited the following month. It can be seen that the application of "block chain + education model" to the training system of colleges and universities in China is an inevitable factor, because it can effectively solve the problems of college students' academic status, educational resources, postgraduate research, and academic fields. The most important issue remains an academic issue. The evolution of the network based on "Internet + education" and the realization of the intelligent circulation of the ecosystem, the need for academic exchanges as an example of a benign incentive mechanism as a "stepping stone", in the process of academic exchange and promotion, should pay attention to the intellectual property rights The problems are the security of learning and teaching, the cyber security of the platform, and the needs of students of different knowledge classes.

3. The Opportunity and Challenge of Blockchain Technology to Colleges and Universities

The core technology of block chain is mainly composed of distributed numerical storage, encryption authorization technology, consensus mechanism and intelligent contract. It is usually implemented by block chain computer code. The above technology is applied to supervise learning performance appraisal, prevent transaction security, and sign legally effective. At the same time, it basically solves the intellectual property rights of colleges and universities and the protection of students' own interests. This paper uses the "block chain + education" application of UC Berkeley and Tsinghua University to carry out model analysis and discuss the application of block chain technology in higher education. Opportunity.

3.1 University of California, Berkeley "Blockchain + Education"

The University of California launched its block chain education for undergraduate courses as early as 2016. The course content is divided into two categories: block chain foundation and block chain development courses. The former is mainly for the block chain-based application of any student's major, and the latter mainly provides developers with the knowledge of the conversion of feasible technology. According to the "Wan Chain House" report, after the University of California opened a block chain course, students generally believe that the block chain is the latest disruptive technology, and the enthusiasm for block chain computer coding is high. Later, he obtained the "integration of industry and education" with IBM.

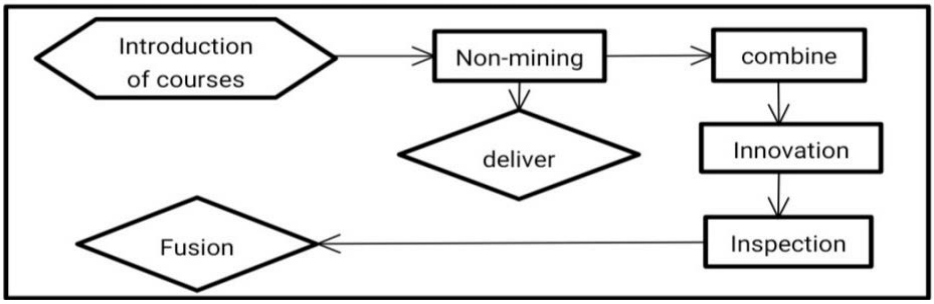

Figure 3. The University of California “block chain + education” model

Some scholars at the University of California have proposed a program based on the use of block chain technology to share medical data. It was published in "Nature" on February 22, 2019, and the research is expressed as an improvement in clinical data that can be collected based on the platform. Industry record management. This shows that the “block chain + education” model of the University of California has broken through the improvement of the school's own data processing stage, and has achieved innovative breakthroughs in combining students with the “block chain+”.

3.2 Tsinghua University "block chain + education"

On August 2, 2017, Tsinghua University established the Joint Research Center for Blockchain Technology. Chen Yuan, vice chairman of the National Committee of the Chinese People's Political Consultative Conference, pointed out that the development of cutting-edge science and technology is inseparable from computers, and that finance is related to the international people's livelihood. The prospects for industrial innovation are very bright. Tsinghua University's “block chain + education” model can be defined as the specialization of computer science disciplines, high-performance computing and distributed systems, cryptography and artificial intelligence. The application of this kind of application in computer science, Tsinghua University's "block chain + education" application seems to "see a lot of blood", because the realization of block chain technology requires computer language editing, can make block chain technology get rapid research and development, However, the market competitiveness generated by the integration of block chain technology with other disciplines is slightly weak.

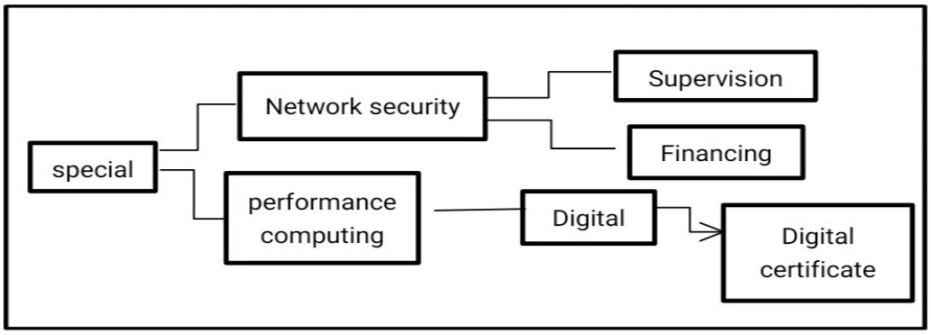

Figure 4. “Block chain + education” model

3.3 Comprehensive analysis of the status quo at home and abroad

Due to the different regional cultures, the United States has always advocated respecting personal values. The “block chain + education” of the University of California is more open. The biggest advantage lies in stimulating students' innovative ability. The block chain + education of Tsinghua University in China "Proposing special education, we can see from the model that the biggest advantage of China's "block chain + education" is that the discipline and block chain technology can be quickly put into market operation after integration, but based on the comprehensive application of the advantages of block chain technology not tall. The “block chain+ education” of the East and the West cannot be used as a comparison. It should be combined with the “block chain+ education” in the

East and West, and “destroy the fine” from the talent cultivation based on block chain technology to accelerate the modern functional field. The intelligent management required.

4. New application system based on block chain technology education

Decentralization, openness, enforceability of information, time stamps can comprehensively solve the above problems of academic fraud, performance fraud, certification difficulties, academic misconduct, etc.

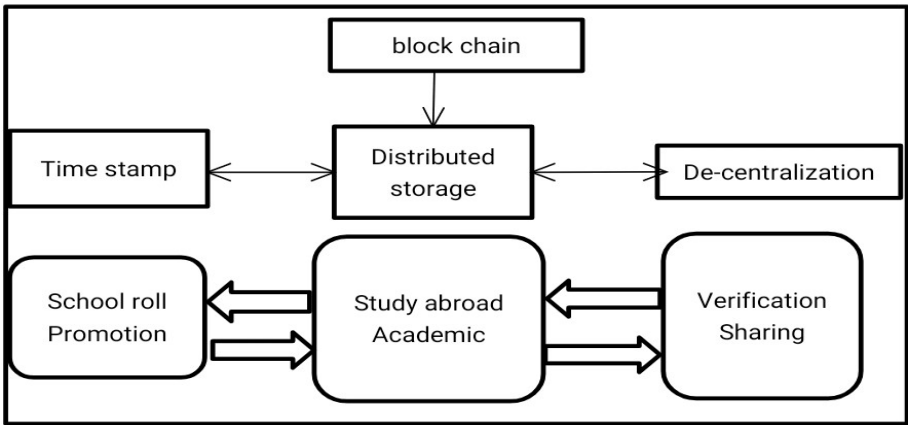

Figure 5. A schematic diagram of the educational problems solved by block chain technology

4.1 Node-type student information processing system

Based on the block chain of the student information processing system, the management class is recorded into all information nodes, which the entry of each information is regarded as a terminal, and the input information needs to be verified on the block chain, so as to realize the supervision of the sub-administrator. At the same time, adding timestamps written by computer language, the tampering of student information is difficult to implement. When each member's information is stored in the node, it will also be uploaded to the block chain. Even if the data is destroyed, the information can be guaranteed. Sex. An information chain which is complete but difficult to tamper with, can verify the authenticity of the student's status at any time and places.

4.2 Educational resources interaction of "distributed storage"

The protection work of rights of which is on original in the information age cannot be effectively "rooted", and the "distributed storage "in the block chain system just solves this problem. Teachers can publish exclusive teaching and talent-training courseware on the information processing system composed of “nodes” and share them in multiple nodes. Users can not only enjoy the convenience brought by information sharing, but also maintain the publisher's Original rights protection. Teachers with lower original ability can enrich their teaching resources, and teachers with high original ability can enhance their own popularity.

4.3 Transparent postgraduate application abroad

In view of the problem of studying abroad, there are many inaccurate questions related to going abroad and the inquiry of information problems in foreign universities, which has led to many “black education institutions”. There are few channels in the country that can get any information about foreign educational institutions, including: teacher resources, school environment, and teaching level. If the block chain is constructed on the basis of a public information platform that cannot be falsified and cannot be falsified, the information integration query function can be fully realized. It is impossible for any time, any individual, or any organization to tamper with and destroy the above information. The complete decentralized running chain and complete time stamping record ensure the transparency of information.

4.4 Academic issues

Today's academic fraud, paper fraud is not uncommon. The authenticity of various experimental data is not verified. Imagine if the block chain technology records each implementation process and steps, and whether the release time can eliminate such problems. At any stage of academic researches and development, the time generated by each process and the time of the final result are stored in the block chain. The anonymity of the secret means, the tamper-proof encryption foundation can guarantee the authenticity of the published information, and is not controlled by anyone.

5. Conclusion

Not only in higher education schools, but also in China, some block chain investment companies have begun to enter block chain education. The first condition for the full popularization of “block chain+ education” is the intention of correcting the block chain, applying the block chain-based technology incentives from a benign academic perspective, and using the block chain technology to be unforgeable, audited, and decentralized. The characteristics of transparency and transparency form a main line from the verification of academic qualifications to the exchanges of educational resources, interspersed with information inquiry and a completely transparent ecological circulation system for academic creations. The “block chain” will start from higher education and promote the intelligentization of data in all walks of life. Application, accurately grasp the growing trend of the fifth industrial revolution in the future.

Acknowledgements

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