

Practical Exploration of Student Club Based on Blockchain by Shandong Technology and Business University and Ethereum Foundation

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ABSTRACT

Student clubs in colleges and universities are self-organized and self-managed mass organizations, which play an important role in improving students' comprehensive quality and application of professional skills. As a new mode to promote student clubs, the attempt to build professional clubs jointly by colleges and organizations of various industries is of positive significance for colleges and universities to utilize social resources in a bid to culture practical and applied talents. Given the increasingly obvious role of blockchain in social development, Shandong Technology and Business University and Ethereum Foundation have made joint efforts to establish university student block chain seminar, centering on technology learning, science popularization, teaching assistance, science and technology competition, project participation, career guidance. Good results have been achieved in practice. The two parties will further improve the issues encountered in practice by means of adjusting teaching content, adding education on financial intelligence, improving the language training, expanding job market, and providing whole-process and all-round support.

Keywords: blockchain, industrial organization, student club, talent training

I. INTRODUCTION

Students clubs in colleges and universities shoulder the task of educating students. Based on common interests, members of student club can deepen experience, cultivate their abilities, master skills, improve their quality, and seek for career development and expansion. As an emerging application technology, blockchain has gradually entered various fields of social development. Many universities have thus established and promoted blockchain professional clubs for college students. In universities with blockchain majors and similar majors, such clubs serve as extracurricular quality development and supplement to application of skills. For schools that have not yet developed blockchain major, it is important and feasible to set up special associations with organizations among blockchain industry, that is, to train cross-disciplinary talents in the field of blockchain based on off-campus resources.

II. BLOCKCHAIN AND ITS INDUSTRIAL ORGANIZATION

A. The concept and application of blockchain

Blockchain is a technical term in the applied information technology industry. Technically speaking, blockchain is a special sharing database, in which the data stored for memory and use are all for future reference based on security considerations. In general, it has the characteristics of being difficult to be forged, remaining traces, traceable source and process, and fully opening to specific objects. Therefore, the blockchain application technology boasts credibility and technical conditions. It can guarantee the premise of technical "trust" in the cooperation of all walks of life, and solve the potential information asymmetry, which is conducive to the realization of mutual trust and consistency of work scheduling between partners.

On January 20, 2016, Digital Currency Seminar of The People's Bank of China announced that it has achieved phased results in its the research. The meeting affirmed the value of digital currency in reducing traditional currency issuance and other aspects, and indicated the bank's exploration in digital currency issuance. The line has greatly boosted confidence in the digital currency industry. This is the first clear stance

on digital currency since the five ministries (Ministry of Commerce, China Securities Regulatory Commission, State Administration of Taxation, State Administration for Industry and Commerce of the People's Republic of China, and State Administration of Foreign Exchange) issued a notice on preventing bitcoin risks on December 5, 2013. On December 20, 2016, China FinTech digital currency alliance and FinTech research institute were formally prepared.

On January 10, 2019, the State Internet Information Office issued the *Regulations on the Management of Blockchain Information Services*. On October 24, 2019, during the 18th collective study session of the Political Bureau of the Central Committee, General Secretary Xi Jinping emphasized that "the blockchain is an important breakthrough for independent innovation of core technologies" and "the innovative development of blockchain technology and industry should be accelerated". "Blockchain" has come into public view and become the focus of social attention.

B. Ethereum Foundation

Ethereum Foundation (ECF), a non-profit organization, is dedicated to providing funding and strategic guidance for projects in various areas of the blockchain: critical infrastructure and research, developer experience and tools, open source development initiatives, software design, and community education. The ECF was established in 2018 by six founding members, including Parity Technology, a company founded by CTO of ECF. Over the past year, the ECF has funded 40 projects and 20 events, ranging from thousands of dollars to more than 100,000 dollars. The latest ECF framework has been fully open and has cooperated with venture capital institutions, exchanges and incubators. ECF's China headquarter in Shanghai and is responsible for the docking and service of China's blockchain technology projects with global R & D institutions, developer communities, and venture capital funds. Under the headquarters, there are blockchain technology maker space companies, distributed in Beijing, Shanghai, Singapore, Tokyo, Berlin, Seoul, Paris and other major cities, and focusing on serving researchers and entrepreneurs of blockchain technology to achieve project incubation, mobile office, entrepreneurship education and venture capital introduction.

III. COOPERATION PROCESS

A. Feasibility

According to the characteristics of school wealth management construction vision of Shandong Technology and Business University, the cultivation of digital wealth management talents in computer major should be supported by students clubs and

corresponding activities, and joint training should be carried out by cooperating with international organizations of high quality and level. In terms of social talent demand, all walks of life, especially banks, insurance and securities institutions that recruit graduates from finance and economics academies, have strengthened their demand for blockchain technology.

B. Co-construction paths

The School of Computer Science and Technology of Shandong Technology and Business University established blockchain technology research association in April 2019. The association is listed as the ECF global cooperation site of colleges and universities, and teachers of the college are responsible for the selection, management, training, guidance and operation of personnel on campus. The association aims to recruit members of students with excellent academic performance and interest in blockchain technology from several majors among School of Computer Science and Technology, such as computer science and technology, software engineering and network engineering, who will study blockchain-related knowledge together, including blockchain (ECF) programming and development, in the laboratory space provided by the school.

C. Talent selection

The school selects students with scores above 105 in mathematics, above 105 in English, above 80 in C language and who are interested in blockchain technology to join the club directly. The second and third echelons are set up for students who intend to join the club but fail to meet the standards, so as to encourage them to study hard, master learning methods and research spirit, and reserve personnel for follow-up talents cultivation.

D. Education and teaching

ECF provides professional technical guidance, overseas intellectual support and high-end expert lectures to the blockchain technology research institute of the school, endowing excellent student members with access to the world's top technology teams for open source project development. Staff from ECF headquarter and China headquarter will come to the school on a regular basis for guidance, and adjust the training paths for blockchain programming talents such as teaching, practice, research, exchange, competition, observation and projects. Thanks to the daily work requirements of Yantai high-tech industrial park and blockchain technology laboratory of Yantai digital college, the student club participated in the industrial blockchain development project and academic research work. At the same time, the club will immediately sort out the relevant pictures, videos and courseware of influential meetings in and out of China, and revise

them according to the progress of each echelon for members to study and discuss.

E. Participation into competition

According to professional competitions, the student club conducts entry competition, basic competition, promotion competition and project competition, and finally sends the best members to participate in the national blockchain innovation and entrepreneurship competition, and international blockchain hackathon competition. Some of them will go to universities and incubators outside China for blockchain development internships. Through the competition, students can gain recognition in the corresponding industry, and work in global blockchain high-tech enterprises and organizations such as ECF after graduation.

F. Assessment

Firstly, students were evaluated on financial intelligence education based on relevant indicators such as participation in financial intelligence special education, financial intelligence research, financial intelligence competition and financial intelligence practice activities. Second, educational elements such as college teaching, scientific research, auxiliary teaching and study group can be integrated to penetrate financial intelligence education into the overall system design and specific operation links, so as to make professional teaching humane, financial intelligence education effective and joint cultivation efficient. Third, a "five-in-one" cultivation model covering financial intelligence education content, wealth management and financial intelligence education in classroom, financial intelligence cultivation in campus culture, special financial intelligence competition, and cross-research platform construction between major and financial intelligence was constructed, and qualitative and quantitative assessment of the student club was made based on the cultivation model.

IV. EXISTING PROBLEMS AND COUNTERMEASURES

A. Existing problems

First, there are differences in learning and cognition among student club members in different majors. The progress of specific education is inconsistent. Second, the blockchain itself is a technical application in the field of wealth management. However, it is found in practice that many college students' application technology ability is constantly improved, but the overall financial intelligence is not high, which is not conducive to their use of technology to explore the market and create economic benefits after entering the club. Third, the technical courses offered by ECF are entirely in English, and the lack of English proficiency

and application ability of many college students requires translation, which increases teaching difficulty. Fourth, the employment orientation is limited to blockchain industry for the time being. Students with average professional skills are not competitive in career development. Fifth, the audience of the club is limited to few teachers and students, failing to arouse the consensus and attention of the whole school.

B. Countermeasures

First, it's necessary to design educational contents for different groups with different emphasis, adhere to the unification of professional requirements and special requirements, of explicit education and implicit education, and of educational dominance and educational subjectivity, so as to increase the pertinence and effectiveness of relevant blockchain popularization and education. The second is to improve college students' financial intelligence through relevant education, and guide them to master and apply knowledge and skills related to blockchain in combination with their respective majors. At the same time, it is reasonable to set up the annual class plan of college financial intelligence education. Topics can be introduced in the first class, and in the second class, community special activities can be carried out to combine practice with education. Thirdly, English training is carried out in combination with technical courses to provide reserves for cultivating international technical talents. The fourth is to integrate the blockchain technology into employment units of business colleges and universities: banking, insurance, securities institutions, as well as formal public offering and private placement institutions, which can not only introduce blockchain technology into the units, but also open up a new path for the employment of college students. Fifth, joint efforts and cooperation should run through the whole process and in all aspects of education. Schools and colleges should attach great importance to the construction and development of professional technical clubs, and arrange professional teachers, auxiliary teachers and counselors to provide support for the management and operation according to specific situation. Joint efforts should be made in all aspects: ranging from foundation of financial intelligence to knowledge of wealth management, from topic learning education to organization or participation of relevant competitions, from daily cultural infiltration to topic indoctrination learning, to explore and form a school-enterprise professional and technical personnel training mode with clear rights and responsibilities, reasonable division of labor, close cooperation and smooth operation.

V. CONCLUSION

On the whole, the college student blockchain professional student club jointly built by Shandong

Technology and Business University and ECF is successful for the time being. However, some problems are also found in the actual operation. Therefore, colleges and universities should pay more attention to and continuously strengthen its support for college student club, and industry organizations should also enhance investment in professional technology and support talent training in colleges and universities, so as to jointly train college students who can satisfy social and economic demands.

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