

# Construction of curriculum assessment and system based on curriculum ideology and politics—taking the blockchain technology principle and application course as an example

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**Abstract:** In order to implement the educational concept of establishing morality and cultivating people in colleges and universities and improve the teaching effect of professional courses in colleges and universities, this time, take the blockchain technology principle and application course as an example, and build the course assessment and evaluation system based on the course ideological and political concept. First, clarify the significance of ideological and political education in the curriculum and the way of integration with the blockchain professional curriculum; Secondly, to understand the current situation of the assessment and evaluation of the blockchain technology principle and application courses, the existing evaluation system has the problems of single evaluation method and incomplete feedback information, which cannot fully understand the students' professional course learning and students' ideological and political level, so it is necessary to build a new assessment and evaluation system; Finally, combined with the ideological and political education of the curriculum, students are assessed and evaluated from two aspects: optimizing the evaluation method and realizing multi-channel feedback, in order to fully understand the students' school situation.

**Keywords:** Curriculum ideological and political; Course assessment; Blockchain technology; Evaluation system

## 1. Introduction

The essence of curriculum ideological and political education is a kind of education with the goal of establishing moral and cultivating people. Our education goal has been to improve the people's comprehensive quality and knowledge level. Therefore, we should not only attach importance to the students' professional knowledge learning, but also pay attention to the students' ideological and moral level. To achieve the purpose of collaborative education [1]. As a new application mode of computer technology, blockchain technology covers distributed data storage, point-to-point transmission, encryption algorithm and consensus mechanism. It is a widely used technology at present and has a good development prospect. This time, taking the principle and application course of blockchain technology as an example, a more perfect course assessment and evaluation system is built by combining the ideological and political thinking of the course. In order to fully understand the students in the school for the mastery of professional knowledge and ideological and political level.

## 2. Course ideological and political education

In the era of great social change and cultural prosperity, we should not only establish scientific thinking, but also establish innovative thinking. The society not only requires students to have rich professional knowledge, but also requires students to have correct values and comprehensive abilities. These qualities need to be acquired by students during their study in colleges and universities. The establishment of curriculum ideology and politics is an organic combination of these to ensure the comprehensiveness of education [2]. The course ideological and political education is simply a combination of ideological and political content and professional knowledge, but its essence can be seen as a reform of teaching mode. "Ideological and political" covers multiple levels of content, ranging from national awareness to cultural self-confidence, which needs to be learned by

contemporary students. The ideological and political education mode of this course is different from the traditional ideological and political education. It is mainly based on recessive education. These ideological and political contents are interspersed with professional knowledge to help students develop in an all-round way and achieve moral cultivation [3].

### **3. Current status of the assessment and evaluation of the course of blockchain technology Principle and application**

As the name implies, blockchain is composed of a block chain structure, embedded with massive data, these data structure chain as the standard for data inspection, can accurately verify whether there are problems in the data, after verification data can be stored. In addition, there is a distributed node consensus algorithm inside the blockchain, which can generate new data structure from time to time, replace the old data structure, realize the update and iteration of data, and thus realize the encryption transmission and access permission setting, so as to improve the security of data access. This new distributed infrastructure can be applied to a wide range of domains, and more architectures can be derived from it in the future. Therefore, it is very important to learn the course of blockchain technology principle and application, but the current course assessment and evaluation system still needs to be improved. The following is mainly analyzed from two aspects: single course evaluation method and incomplete evaluation feedback.

#### **3.1. Single evaluation method**

The course of blockchain technology principle and application is a subject with strong applicability, so it is necessary to evaluate students' learning situation based on their theoretical knowledge. The existing evaluation methods are too single, mainly written assessment, supplemented by operational skills assessment in individual colleges and universities, ignoring the assessment of students' moral cultivation and comprehensive ability [4]. Some professional teachers will simply infiltrate the ideological and political elements in the class, but only unconscious behavior, no educational objectives, and no teaching plan, so it is lower than what professional qualities students need to have while learning the blockchain professional knowledge without detailed explanation and explanation. This fragmented ideological and political teaching method cannot play an educational role in students' daily learning. In the assessment, there is no awareness of assessing students' ideological and political level [5]. In most schools, there is a problem of valuing process over result in education and assessment, which is also an important reason for the single assessment method. The purpose of assessment is not to comprehensively understand students' learning and ideological understanding in school, but to evaluate students' learning effect of the principle and application of blockchain technology based on credits and the last exam. This assessment method can only identify students' grasp of basic knowledge, but cannot accurately show the individualized differences among students, and cannot motivate students [6]. In addition, most colleges and universities take the attendance of students as an evaluation criterion. This practice can indeed make the school know the attendance of students, but it is a kind of passive attendance, cannot mobilize students' learning enthusiasm, students with negative emotions of being assessed in class, the learning effect is not ideal.

#### **3.2. Incomplete evaluation feedback**

The purpose of the school's curriculum assessment and evaluation is to feedback the students' situation through the evaluation results, but the single evaluation method also leads to the problem of incomplete evaluation and feedback [7]. The school attaches importance to the teaching of theoretical and technical knowledge, and despises the ideological and political education of students. The evaluation results can not reflect the ideological and political level of students. In addition, this evaluation cannot help teachers adjust the teaching mode, and cannot play a role of auxiliary teaching. Therefore, the current curriculum assessment and evaluation system needs to be adjusted, and it should be adjusted in time to build an evaluation system that can more comprehensively reflect the students' knowledge level and ideological and political level, so as to be more conducive to the comprehensive development of students.

### **4. Construction of curriculum evaluation system**

Blockchain contains multiple structural layers such as data layer and incentive layer, which can

realize various technologies such as data encryption. The time-stamped chain block structure and the consensus mechanism mentioned above greatly enhance the intelligence of blockchain [8]. Blockchain technology has been widely used in municipal work, railway work, logistics business and other aspects due to its security, openness and transparency, and has become the foundation of social operation and development. Therefore, the principle and application of blockchain technology courses have high requirements for students in learning, requiring teachers and students to work together, and more importantly, students to have a high level of ideological understanding.

#### 4.1. Optimize the evaluation method

The diversified development of evaluation methods is an important means to optimize evaluation methods. First of all, the evaluation methods in the course of blockchain technology principles and applications should include written assessment, practical assessment, ideological and political assessment, and other forms. In addition, student self-evaluation, teacher evaluation, and teacher-student mutual evaluation should also be added. Written assessment can assess students' mastery of theoretical knowledge, practical assessment can understand students' skill level, and ideological and political assessment can evaluate students' ideological and cognitive level [9]. The addition of ideological and political assessment requires integrating ideological and political content into daily teaching. The progress and method of ideological and political integration in the principle and application course of blockchain technology need to be grasped and controlled by teachers, and the addition of ideological and political integration should be adjusted according to students' acceptance degree and class teaching content, so that students can accept the construction of ideological and political development in the professional course of blockchain technology principle and application in a silent way. Understand the embodiment of socialist core values in the professional field. In addition, in ideological and political construction, we should not only consider the guidance of students' values, but also consider the inheritance of traditional culture and the transmission of scientific spirit. Therefore, teachers should pay attention to the way of ideological and political integration in the teaching of blockchain technology principle and application, so as to facilitate students' absorption and understanding.

#### 4.2. Implement multi-channel feedback

The optimization of evaluation methods mentioned above is also the basis for achieving multi-channel feedback. The diversification of evaluation methods can also help teaching to obtain student information from multiple aspects of feedback. In addition, student self-evaluation, teacher evaluation and teacher-student mutual evaluation are dynamic evaluation methods, and the feedback results are more accurate. Construct a multi-channel feedback assessment and evaluation system, as shown in Figure 1.

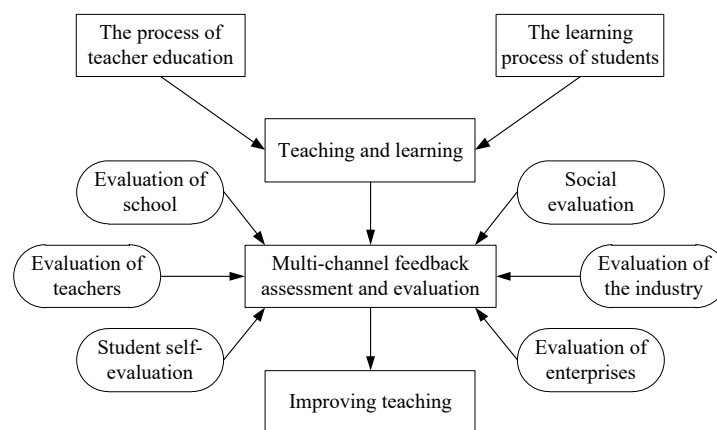


Figure 1: Multi-channel feedback evaluation system

Student self-evaluation is to analyze the learning status of the blockchain technology principle and application course from their own perspective, and analyze whether the knowledge points are comprehensive. This evaluation method is conducive to students' self-examination, always pay attention to their own status, and avoid lax learning attitude; The teacher evaluation is a comprehensive evaluation based on the attendance rate of students, the completion of homework, the learning attitude in class, and whether there has been any adjustment for a period of time. This evaluation method allows

teachers to focus on students, which is conducive to teachers' timely grasp of the learning situation of students' blockchain technology principles and application courses, and can not only timely remind students, It can also adjust the teaching progress and teaching methods according to the students' grasp; Teacher-student mutual evaluation helps teachers and students to evaluate from each other's standpoint, which is conducive to teacher-student interaction. Students can have a better understanding of teachers' teaching mode and teaching habits, and more conducive to students to keep up with teachers' teaching pace. In addition, it should be noted that these three evaluation methods are dynamic evaluation methods, and the teaching feedback obtained is also dynamic, which not only realizes multi-channel feedback, but also helps students and teachers to pay attention to their own learning and teaching situation, and also achieves the purpose of constant feedback to a certain extent.

## 5. Conclusion

Blockchain is a new application mode of distributed data storage, point-to-point transmission, consensus mechanism, encryption algorithm and other computer technologies. This technology is widely used in various fields of society, because this work requires professional technical support, and blockchain-based work requires data encryption and storage, and practitioners need to have a high level of ideological awareness to ensure the orderly progress of work and the protection of national property. Therefore, in the context of curriculum ideological and political education, this time, the curriculum assessment and evaluation system is built based on curriculum ideological and political education, and applied to the blockchain technology principle and application course, in-depth analysis of the shortcomings of the current assessment and evaluation system, and make adjustments according to the existing problems. By optimizing the evaluation method and realizing multi-channel feedback, teachers and students can always understand their own state of teaching and learning and make adjustments as soon as possible. In addition, integrating ideological and political content into professional courses and constructing ideological and political framework is also a test of teachers' teaching ability. Therefore, it is not only conducive to the improvement of students' learning effect, but also conducive to the improvement of teachers' teaching level, and more conducive to the optimization of school teaching system.

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## References

- [1] Zhang Kai, Wen Mi, Chen Siyuan, et al. Construction of Blockchain Curriculum System Integrating Ideological and Political Ideas of Curriculum--Taking high level general education course of Shanghai University of Electric Power as an example[J]. *The Guide of Science & Education*, 2021(3): 134-135.
- [2] Tang Chenghua, Shan Ludongdong, Yin Niyating. Research on the Construction of curriculum Ideological and Political Evaluation Content System based on POER Role -- A case study of "New Media Application" course[J]. *Journal of Hunan Mass Media Vocational and Technical College*, 2021, 21(04): 102-107.
- [3] Zhu Xiaoting. Research on the Path of Integrating Ideological and Political Elements into Higher Vocational Curriculum Construction -- A Case study of "Blockchain Finance Application" Course[J]. *Education and Teaching Forum*, 2021(26):141-144.
- [4] Wei Ziqiu, He Yongzhen. Constructing Course Ideological and Political Evaluation System Based on CIPP Model—Taking "Supply Chain Management" Course as an Example[J]. *Journal of Hebei University of Science and Technology(Social Sciences)*, 2021, 21(03):76-81.
- [5] Wang Yue, LI Mingwen, Huang Chao. Construction of Ideological and Political Assessment and Evaluation System based on Safety Detection Technology Course[J]. *China New Communications*, 2021, 23(23):129-130.
- [6] Hu Yan. The Teaching Evaluation System and Operation Strategy of Civil Affairs Courses from the Perspective of "Curriculum Thought and Politics"[J]. *Journal of Changsha Civil Affairs Vocational and Technical College*, 2021, 28(01):87-89.
- [7] Han Jianchen, Peng Xiongfei. On the Online Teaching of Ideological and Political Courses in

*Colleges and Universities with Leading Edge Technology Help--Taking Teaching of "Ideological and Moral Cultivation and Legal Basis" as an Example[J]. Journal of Ankang University, 2021, 33(6): 64-67.*

*[8] Liu Yuan, Lu Jian, Liu Haiyan, et al. Teaching Reform and Innovation of Undergraduate Management Courses Based on Block-chain and Career Guidance[J]. Journal of Hebei Agricultural University: Social Science Edition, 2021, 023(002): P. 114-121.*

*[9] Wang Lin. Practical Exploration on the Courses of Implementing Ideological and Political Education of Finance and Economics Major in Higher Vocational Colleges: Taking Blockchain Finance as an Example [J]. Journal of Changzhou College of Information Technology, 2021, 020(004): 53-56.*