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# Evaluation and Teaching Index System based on Campus Virtual Currency

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Abstract: This paper introduces the method of teaching quality evaluation by using campus virtual currency evaluation model. Firstly, we demonstrate the rationality and feasibility of introducing campus virtual currency into education evaluation by solving three problems existing in traditional evaluation system. Then, a comprehensive index system based on campus virtual currency system is designed. Finally, taking the evaluation index of economic management major as an example, the analytic hierarchy process is used to determine the index weight.

Keywords: Campus virtual currency; Evaluation index; Evaluation effect

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#### 1. Introduction

The Ministry of Education issued the Opinions on Accelerating the Construction of High-level Undergraduate Education and Improving Talent Cultivation Ability (Gao [2018])(2), aiming at accelerating the construction of high-level undergraduate education. Therefore, it is necessary to introduce a new mechanism to

comprehensively measure the results of college students' talent training.

#### 2. Literature Review

We summarize three problems in the traditional teaching evaluation scheme (table 1).

#### **Table 1:** Problems in the implementation of traditional teaching evaluation

The evaluation effect of teachers' teaching quality is not good: The effectiveness of traditional questionnaires is increasingly questioned. The survey results are often undifferentiated and objective. Fu Chen et al. found that 93.91% of teachers in a university scored above 95.0Ge Song found that only 27.8% of students at a college were able to seriously evaluate teaching. [2]

Too much emphasis on scientific research results leads to utilitarianism in teachers' development: The rational person hypothesis assumes that everyone is trying to get the most benefit with the least cost. Therefore, the fuzzy teaching evaluation method often leads to the deterioration of teachers' teaching quality.

The quality credit system cannot effectively mobilize the learning enthusiasm: Laux found that the optimal incentive plan should include both long-term incentive and short-term incentive. [3] Because the credit system commonly used in traditional evaluation takes as long as one year, it is difficult to achieve a good incentive effect.

Obviously, the traditional teaching evaluation method has many negative effects.

### 3. The advantage of campus virtual currency evaluation on teaching

The biggest advantage of virtual currency valuation is that it can adjust the allocation of resources by taking advantage of the fluctuations of participants' prices in the market. In addition, it can be gamified as a reward for reinforcing good behavior. For example, students must be rewarded timely

through active learning and practice. In this way, the incentive plan can be better implemented.

To sum up, the campus virtual currency evaluation scheme proposed in this paper is feasible.

## 4. The design of evaluation index based on analytic Hierarchy process

We use AHP to establish the evaluation index system of students (Table 2) and teachers (Table 3).

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**Table 2:** Teaching evaluation index framework of college students

A	В	C		
Comprehensive quality of students	morality	Ideological and political course results		
		Participation in political activities		
		Whether or not to join the party		
	intelligence	Professional Course scores		
		Competition Status (except sports and Sports)		
		Papers published and patents obtained		
		Business scale		
	fitness	Body health	Sports scores	
			Athletic performance	
			Participation in sports Meeting	
		Mental health	Results fluctuations	
			Fluctuations in the number of medical visits	
			Campus card consumption fluctuates	
	beauty	Results of art competition		
		Participation in artistic activities		
	labor	Volunteer time		

**Table 3:** Teaching evaluation index framework of college teachers

A	В	С				
	education	The lecture				
Teaching level	education	Race guide				
of teachers	41	Course selection				
	teaching	Scientific research guide				

### 5. The determination of index system weight based on AHP

We take the indicator system of economics and management as an example. In addition, as the judgment matrix is composed of subjective values, consistency test is needed to verify the reliability of the results. When  $CR_j = \frac{\sum_{j=1}^m a_j C I_j}{\sum_{j=1}^m a_j R I_j} \le \frac{\sum_{j=1}^m a_j R I_j}{\sum_{j=1}^m a_j R I_j}$ 

0.1, the matrix is considered reliable; Finally, we get the results in the table below (Table 4).

**Table 4:** Index weights of economics and management students

С	The weight
Ideological and political course results	0.0344
Participation in political activities	0.0093
Whether or not to join the party	0.0760
Professional Course scores	0.4164
Competition Status (Except for literature and sports competitions)	0.0543
Papers published and patents obtained	0.0768
Business scale	0.0601
Sports scores	0.0220
Athletic performance	0.0349
Participation in sports Meeting	0.0031
Results fluctuations	0.0200
Fluctuations in the number of medical visits	0.0200
Campus card consumption fluctuates	0.0200
Results of art competition	0.0289
Participation in artistic activities	0.0041
Volunteer time	0.1198

#### 6. Conclusion and Suggestion

This paper only discusses the evaluation and teaching of virtual currency. In the future, virtual currency can also be used for exchanges between schools, creating a space for the development of currency exchange. By recognizing credits, it will facilitate the sharing of high-quality educational resources and promote the cross integration between different schools and disciplines.

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