

Research on the Quality Assessment System of Chinese University Student Association Construction Based on CIPP Model

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Abstract

This study aims to construct a quality assessment system for the construction of student associations in Chinese universities based on the CIPP model (Context, Input, Process, Product). Through systematic literature review and theoretical analysis, combined with expert consultation and analytic hierarchy process (AHP), this paper successfully establishes an evaluation index system covering four dimensions and three levels, with four first-level indicators, 12 second-level indicators, and 36 third-level indicators. This evaluation indicator system takes into account the context in which the association is located, the input resources, the process of activities and the final output results. In addition, the scientific and authoritative nature of the selection of the indicators was ensured through the Delphi method, and the distribution of the weights of the indicators was further confirmed through the analytic hierarchy process, ensuring the objectivity and adaptability of the evaluation system.

Keywords: student association; CIPP model; evaluation index system; Delphi method; analytic hierarchy process

1. Introduction

As an important part of the higher education system, China's student associations have experienced rapid development and change in recent years (Huang et al., 2021). With the massification of higher education, student societies not only provide a platform for students to show themselves and develop their interests, but also become an important place to cultivate students' organisational, creative and practical abilities (Cai & Wang, 2023). However, with the increase in the number and activities of the societies, the problems of their management and quality have become more and more prominent, and how to scientifically and systematically evaluate and guide the construction of the societies has become an urgent task in the management of higher education (Wang et al., 2022).

This study aims to construct a quality assessment system suitable for Chinese university student

societies based on the CIPP (Context, Input, Process, Product) model. Through this system, the construction and operation of clubs can be systematically evaluated to promote the healthy and orderly development of clubs. The core questions of the study include: how to define and quantify the quality indicators of club construction? How to systematically construct the evaluation index system according to the framework of CIPP model? and how to assign weights to the indicators?

The relevant theories and researches in this study mainly focus on the application of the CIPP model, the method of constructing the evaluation system, and the use of the Delphi method and the analytic hierarchy process. The CIPP model, as a mature evaluation framework, has been widely used in the evaluation of programmes in education and other fields (Kasmainsi et al., 2023). The Delphi method is mainly used in the construction of the evaluation system to reach consensus through the opinions of experts, while the analytic hierarchy process is used to assign weights to evaluation indicators to ensure the systematic and scientific nature of the evaluation (Rebia et al., 2023). Through the comprehensive application of these theories and methods, this study will construct an evaluation system for student associations that meets the reality of Chinese colleges and universities.

2. Theoretical framework and methodology

2.1 Introduction to the CIPP model

The CIPP model is an integrated assessment framework, proposed by Stufflebeam, for project evaluation and decision support. The model name CIPP stands for four components: Context, Input, Process and Product. In this study (Wilson, 2023), the CIPP model was used to construct and evaluate a quality assessment system for student associations in Chinese universities.

- Context: assessing the environment and needs of the association and analysing the current situation and development context of association building.
- Input: relates to the resources and strategies invested in building the association, such as management regulations, financial support and training.
- Process: focuses on the process of implementing the activities of the association, including the way in which the activities are organised and the interaction in the process.
- Product: Evaluates the final outcomes of club activities, including the contribution of the club to the empowerment of students and its social impact.

2.2 Research methodology

2.2.1 Thematic analysis

In this study, thematic analysis was used to conduct a systematic literature analysis of existing regulations governing university student associations. By accurately coding and categorising the information in the literature, we identify key themes and patterns, which helps to initially construct the association evaluation index system (Thelwall, 2021). The method provides theoretical support

for the design of the evaluation system by interpreting the content of the literature at the macro and micro levels (Samanes et al., 2023).

2.2.2 Delphi method

The Delphi method is a technique for reaching consensus through repeated expert consultation (Andreev & Zavyalov, 2023). In this study, the method is used to validate and determine the evaluation indicator system. Through multiple rounds of questionnaire surveys, opinions from experts in the field were collected to gradually refine and adjust the evaluation indicators to ensure the comprehensiveness and scientificity of the evaluation system (Marcos et al., 2023).

2.2.3 Analytic Hierarchy process

The analytic hierarchy process (AHP) is a commonly used decision support tool for assigning weights to evaluation indicators (El Ghazali et al., 2023). In this study, the complex evaluation problem is decomposed into easily comparable parts by constructing a hierarchical model, and then the relative importance of each indicator is calculated through a pairwise comparison matrix (Du, 2023). The application of this method ensures the objectivity and rationality of the evaluation indicator system (Liu et al., 2023).

Through the comprehensive application of these methods, this study will establish a scientific and practical quality assessment system for university student association construction based on the CIPP model, which will provide a basis and direction for the continuous improvement of university associations.

3. Construction of the evaluation index system

3.1 Data collection

The data source of this study is mainly based on the literature analysis of existing regulations related to the management of university student associations in China, and specific documents include the Measures for the Management of Construction of Student Associations in Colleges and Universities issued by the Ministry of Education and the Central Committee of the Communist Youth League of China in 2020, and the Tips for the Standardised Management of Student Associations issued by the Hubei Provincial Education Institution in 2022. In addition, this study incorporates several research documents related to the construction of student associations in colleges and universities to enhance the theoretical foundation and practical applicability of the evaluation index system. The data collection process was carried out through a systematic literature review and content analysis method, aiming to distil the key factors affecting the quality of student association construction from the existing literature. The type of data used is qualitative and the information is extracted mainly through textual analysis.

3.2 Constructing an evaluation indicator system

the existing literature. The type of data used is qualitative and the information is extracted mainly through textual analysis.

Table 1: A quality assessment system for the construction of student organisations in the initial structure

| Level 1 | Secondary indicators | Tertiary indicators |
|---------|-----------------------|---------------------------------|
| Context | Policy and Regulation | Regulatory Adaptability |
| | | Policy Update Frequency |
| | | Policy Clarity |
| | Resource Environment | Funding Availability |
| | | Facility Completeness |
| | | Resource Appropriateness |
| | Cultural Atmosphere | Openness |
| | | Supportiveness |
| | | Diversity |
| Input | Financial Support | Budget Transparency |
| | | Funding Adequacy |
| | | Financial Management Efficiency |
| | Human Resources | Teacher Involvement |
| | | Managerial Competence |
| | | Human Resource Appropriateness |
| | System Development | System Completeness |
| | | Enforcement Strength |
| | | Response Flexibility |
| Process | Activity Organization | Planning Quality of Activities |
| | | Execution Efficiency |
| | | Activity Accessibility |

| | | |
|---------|---------------------------|---------------------------------|
| | Member Interaction | Participation Rate |
| | | Interaction Quality |
| | | Communication Effectiveness |
| | Innovation Implementation | Number of Innovative Projects |
| | | Effectiveness of Innovation |
| | | Continuous Improvement |
| Product | Skill Enhancement | Skill Diversity |
| | | Skill Mastery |
| | | Skill Practicability |
| | Organizational Impact | Internal Influence |
| | | External Influence |
| | | Brand Image of the Organization |
| | Sustainable Development | Development Potential |
| | | Self-Renewal Ability |
| | | Sustainable Financial Security |

4. Revision and improvement of the evaluation indicator system

In the revision and improvement of the assessment indicators, the study conducted two rounds of questionnaires in accordance with the requirements of the Delphi method. In terms of questionnaire design, the study used a five-point Likert scale to measure the attitudes of experts, and the questionnaire used 1, 2, 3, 4 and 5 points to indicate five kinds of attitudes, such as "very unsuitable", "quite suitable", "generally suitable", "quite unsuitable", "very suitable" and so on. The questionnaire used 1, 3, 4 and 5 points to indicate five types of attitudes: "very unsuitable", "quite suitable", "average", "quite unsuitable" and "very suitable". Since this is the first round of indicator selection, based on the principle of conservatism, the study regards the average score of each indicator (between "average" and "more suitable") as the threshold for experts to reach a consensus on the selection of an indicator, i.e., indicators with an average score of more than 3.5 will be retained, while the rest of the indicators will be considered as "more suitable" and "less suitable". be retained, while the remaining indicators would be eliminated.

4.1 Composition of the Expert Team

In this study, 10 experts were invited to participate in the Delphi expert consultation (**Table 2**). The selection of experts included three basic conditions: first, they had a senior title of associate professor or above; second, they were experts and scholars working in Chinese universities; and third, they were faculty members with experience in advising student associations. All experts were required to

volunteer to participate in the study and could guarantee to complete at least two rounds of counselling.

Table 2: Descriptive Statistics of Expert Information

| No. | Gender | Age | Years of work experience | Educational background | Professional title |
|-----|--------|-------|--------------------------|------------------------|---------------------|
| 1 | Female | 51-60 | ≥20 | PhD | Professor |
| 2 | Female | 41-50 | 16-20 | Master's degree | Professor |
| 3 | Female | 41-50 | 16-20 | Master's degree | Associate Professor |
| 4 | Male | 41-50 | 16-20 | Master's degree | Associate Professor |
| 5 | Female | 41-50 | 16-20 | Master's degree | Associate Professor |
| 6 | Female | 41-50 | 16-20 | PhD | Associate Professor |
| 7 | Male | 41-50 | 16-20 | Master's degree | Associate Professor |
| 8 | Male | 41-50 | 16-20 | Master's degree | Associate Professor |
| 9 | Female | 31-40 | 11-15 | PhD | Associate Professor |
| 10 | Male | 31-40 | 11-15 | Master's degree | Associate Professor |

3.

4.2 Coefficient of the degree of authority of the expert

The degree of expert authority is related to the predictive accuracy of the study and the reliability of the results (Lannoy & Procaccia, 2014). The basis on which an expert makes a judgement on a problem (Ca) and the expert's familiarity with the problem (Cs) affect the expert's degree of authority (Cr). The coefficient of the expert's degree of authority is generally expressed by the formula $Cr = (Ca + Cs)/2$ (Du et al., 2018). In this study, Ca is divided into 3 levels of large, medium and small (Table 3), and Cs is divided into 5 levels of very familiar, familiar, average, unfamiliar and very unfamiliar (Table 4), and the experts obtain the information of Ca and Cs through self-assessment.

Table 3: Basis for expert judgement and level of impact

| Basis of judgement | Degree of influence on expert judgement Ca | | |
|---|--|--------|------|
| | oldest | middle | few |
| theoretical analysis | 0.30 | 0.20 | 0.10 |
| practical experience | 0.50 | 0.40 | 0.30 |
| Current status of research at home and abroad | 0.15 | 0.10 | 0.05 |
| personal judgment | 0.05 | 0.05 | 0.05 |

Table 4: Quantitative table of familiarity with expert advice

| familiarity | Coefficient Cs |
|------------------|----------------|
| familiarity | 0.90 |
| more familiar | 0.70 |
| usual | 0.50 |
| not familiar | 0.30 |
| Very unfamiliar. | 0.10 |

In both the first and second rounds of expert consultation, 10 questionnaires were distributed and 10 were returned, with a positive coefficient of 100%. 4 experts had a degree of authority coefficient of ≥ 0.9 , 3 experts had a degree of authority coefficient of 0.8-0.9, 3 had a degree of authority coefficient of 0.7-0.8, and the mean value of the coefficient of the degree of authority of the 10 experts was 0.863 (**Table 5**). It is generally accepted that an expert authority degree coefficient ≥ 0.7 is acceptable in Delphi method studies (Zhang et al., 2022). It can be seen that the expert team in this study has a certain degree of credibility and meets the requirements of Delphi method research.

Table 5: Expertise Authority Level

| No. | Cs | Ca | Cr | Mean |
|-----|-----|------|-------|-------|
| 1 | 0.9 | 1.0 | 0.95 | 0.863 |
| 2 | 0.9 | 0.95 | 0.925 | |
| 3 | 0.7 | 1.0 | 0.85 | |
| 4 | 0.7 | 0.85 | 0.775 | |
| 5 | 0.9 | 0.95 | 0.925 | |
| 6 | 0.9 | 0.95 | 0.925 | |
| 7 | 0.7 | 1.0 | 0.85 | |
| 8 | 0.7 | 0.85 | 0.775 | |
| 9 | 0.7 | 0.85 | 0.775 | |
| 10 | 0.9 | 0.85 | 0.875 | |

4.3 Degree of Expert Activism

The coefficient of expert motivation is expressed according to the recovery rate of the questionnaire, and in general, a recovery rate of more than 70 per cent indicates that the expert is highly motivated. In this study, 10 questionnaires were distributed in the first round and 10 valid questionnaires were recovered; 10 questionnaires were distributed in the second round and 10 valid questionnaires were recovered; the recovery rate of the questionnaires was 100 per cent in both cases.

4.4 Degree of harmonisation of expert advice

The degree of coordination of expert opinion is whether the experts' judgement on the indicators is consistent, which is expressed by the coefficient of variation (CV, standard deviation/mean of each indicator) and Kindler's (Kindler) coordination coefficient (W) (Gallagher & Vajargah, 2000). The smaller the coefficient of variation CV is, the more convergent the expert's opinion on a particular item is, and $CV < 0.25$ is an acceptable range (Xie, 2009). The value of W ranges from 0 to 1, and when W fluctuates from 0.4 to 0.5, the coordination is better, and the counselling can be discontinued. The closer the W value of Kendall's coordination coefficient is to 1, the better the coordination of the expert (Cichomski & Osekowski, 2021).

In this study, the first round of expert consultation involved 10 participants, and the Kendall's coordination coefficient W was 0.401, with a p-value of 0.000. The second round of expert

consultation showed that the Kendall's coordination coefficient W was 0.436, ranging from 0.4 to 0.5, and the results were available with a p -value of 0.000 (**Table 6**). The expert opinions basically converged.

Table 6: Expert Consultation Test Statistics

| first round (of match, or election) | | second round (of match, or election) | |
|-------------------------------------|-------|--------------------------------------|-------|
| N | 10 | N | 10 |
| KendallWa | 0.401 | KendallWa | 0.436 |
| P | 0.000 | P | 0.000 |

4.5 Results of the first round of expert consultation

Through literature research, the first round of consultation questionnaire was directed to the evaluation indicators of "Quality Assessment System of Chinese University Student Organisations". The first-order indicators include four first-order indicators, namely, "context evaluation", "input evaluation", "process evaluation", "product evaluation", 12 second-order indicators and 36 third-order indicators. Product Evaluation", as well as 12 secondary indicators and 36 tertiary indicators, with a specific interpretation of the connotation of each indicator. Experts were asked to evaluate each indicator on a 5-level scale, and to explain the indicators that needed to be adjusted and modified. The results of the first round of expert consultation show that the Kendall coefficient W is 0.401, the mean value of two indicators is less than 3.5, and the coefficient of variation CV (standard deviation/mean value) is greater than 0.25, which does not meet the requirement that the coefficient of variation must be less than 0.25. Therefore, based on the results of the current round of expert consultation and the feedback from experts, the system of non-conformity indicators is modified by changing "Teacher Involvement" to "Managerial Competence" in the level 3 indicators. "Managerial Competence" was changed to "Competence of Club Management Team", and then the second round of expert consultation was conducted.

4.6 Results of the second round of expert consultation

Second round of expert consultation ($N=10$). The first-level indicators include four indicators, namely, "context evaluation", "input evaluation", "process evaluation" and "product evaluation", as well as 12 second-level indicators and 36 third-level indicators. product evaluation", as well as 12 secondary indicators and 36 tertiary indicators, with a specific interpretation of the content of each indicator. The experts evaluated each indicator on a 5-level scale and explained the indicators that needed to be adjusted and modified. The results of the second round of expert consultation show that the Kendall coefficient W is 0.436, the mean value of all evaluation indicators is greater than 3.5, and the coefficient of variation CV (standard deviation/mean value) is less than 0.25, which is in line with the requirements. Therefore, it can be judged that the modified evaluation index system is better than the evaluation index system before the modification, and this study can determine the evaluation

index system through the second round of expert consultation.

5. Determination of indicator weights

5.1 Modelling the hierarchy

This study takes the "Quality Assessment System of Chinese University Student Organisations" as the decision-making goal, and constructs a hierarchical model (**Table 7**) with 4 first-level indicators, 12 second-level indicators as the middle-level elements, and 36 third-level indicators as the bottom-level elements. At the same time, this study coded each evaluation indicator as A1-A4 for primary indicators, B1-B12 for secondary indicators, and C1-C36 for tertiary indicators for data analysis.

Table 7: Quality Assessment System of Student Organisations in Chinese Universities

| Level 1 | Secondary indicators | Tertiary indicators |
|---------------------------|---------------------------|--------------------------------------|
| A1:Context | B1: Policy and Regulation | C1: Regulatory Adaptability |
| | | C2: Policy Update Frequency |
| | | C3: Policy Clarity |
| | B2: Resource Environment | C4: Funding Availability |
| | | C5: Facility Completeness |
| | | C6: Resource Appropriateness |
| | B3: Cultural Atmosphere | C7: Openness |
| | | C8: Supportiveness |
| | | C9: Diversity |
| A2:Input | B4: Financial Support | C10: Budget Transparency |
| | | C11: Funding Adequacy |
| | | C12: Financial Management Efficiency |
| | B5: Human Resources | C13: Instructor's competency |
| | | C14: Competence of association |
| | | C15: Human Resource Appropriateness |
| | B6: System Development | C16: System Completeness |
| C17: Enforcement Strength | | |

| | | |
|------------|-------------------------------|--------------------------------------|
| | | C18: Response Flexibility |
| A3:Process | B7: Activity Organization | C19: Planning Quality of Activities |
| | | C20: Execution Efficiency |
| | | C21: Activity Accessibility |
| | B8: Member Interaction | C22: Participation Rate |
| | | C23: Interaction Quality |
| | | C24: Communication Effectiveness |
| | B9: Innovation Implementation | C25: Number of Innovative Projects |
| | | C26: Effectiveness of Innovation |
| | | C27: Continuous Improvement |
| A4:Product | B10: Skill Enhancement | C28: Skill Diversity |
| | | C29: Skill Mastery |
| | | C30: Skill Practicability |
| | B11: Organisational Impact | C31: Internal Influence |
| | | C32: External Influence |
| | | C33: Brand Image of the Organization |
| | B12: Sustainable Development | C34: Development Potential |
| | | C35: Self-Renewal Ability |
| | | C36: Sustainable Financial Security |

5.2 Constructing judgement matrices

In this study, two-by-two comparisons were made between indicators at the same level to determine which indicator was more important and the level of importance. A judgement matrix was constructed by quantifying the qualitative level of importance through the 1-9 scale proposed by satty et al.

Consultation with 10 experts on the questionnaire on the importance of indicator data continued, based on the expert consultation form on the design of the indicator system. Cumulatively, 10 questionnaires on indicator data were recovered, with a recovery rate of 100 per cent. Based on the recovered expert consultation data were aggregated and calculated using the geometric mean method to obtain a comprehensive judgement matrix. An example is the first-level judgement matrix (**Table 8**).

Table 8: Judgement matrix for level 1 indicators

| | A1: Context evaluation | A2: Input evaluation | A3: Process evaluation | A4: Product evaluation |
|------------------------|------------------------|----------------------|------------------------|------------------------|
| A1: Context evaluation | 1.000 | 0.127 | 0.225 | 0.417 |
| A2: Input evaluation | 8.000 | 1.000 | 1.775 | 3.250 |
| A3: Process evaluation | 4.500 | 0.563 | 1.000 | 1.833 |
| A4: Product evaluation | 2.500 | 0.310 | 0.550 | 1.000 |

5.3 Hierarchical Single Ordering and Consistency Tests

In order to calculate the weight of each indicator based on the judgement matrix, this study firstly finds the normalised eigenvector w corresponding to the maximum eigenvalue λ_{\max} of the judgement matrix by the sum-product method. The consistency indicator $CI = (\lambda_{\max} - n) / (n - 1)$ defined by the scholar Saaty is introduced, and RI is the stochastic consistency of the judgement matrix of order n . The consistency indicator is defined as the random consistency of the judgement matrix (Table 9). Where n is the order of the judgement matrix and λ_{\max} is the maximum eigenvalue of the judgement matrix. Through stochastic simulation can be obtained consistency ratio $CR = CI / RI$, when the consistency ratio $CR < 0.1$, it can be concluded that the judgement matrix has consistency; if $CR \geq 0.1$, the judgement matrix needs to be modified to a certain extent (Kolsrud, 2008), such as a first-order judgement matrix and consistency test (Table 9).

Table 9: Level 1 judgement matrix and consistency test

| judgement matrix | Indicator weights | | | | consistency test |
|---|-----------------------|----------------------|------------------------|-----------------------|---|
| | A1:Context evaluation | A2: Input evaluation | A3: Process evaluation | A4:Product evaluation | |
| Judgement matrix for level 1 indicators | 0.0634 | 0.5000 | 0.2817 | 0.1549 | λ_{\max} : 4.0210 CI:0.0070 RI:0.8900 CR: 0.0079 |

5.4 Hierarchical General Ranking Results

After calculation, it is determined that the CR value of all judgement matrices of each level in the indicator system is less than 0.1, which indicates that they have good consistency, and can be based on which the weights can be calculated, and then further calculated to obtain the comprehensive weights. That is, the weight value of the secondary indicators is calculated first, and then averaged together to get the weight of the first-level indicators, and the weight of the first-level indicators is multiplied by the weight of the second-level indicators to get the final integrated weight, which is the final weight of each second-level indicator in the evaluation system. The final indicator system with the weights of the indicators is obtained (**Table 10**).

Table 10: Weighting values for the overall objective of the evaluation indicator system

| Level 1 indicators | weights | Secondary indicators | weights | Combined weights | Tertiary indicators | weights | Combined weights | | | |
|--------------------|---------|----------------------|---------|------------------|---------------------|---------|------------------|-----|--------|--------|
| A1 | 0.0634 | B1 | 0.2274 | 0.0144 | C1 | 0.4421 | 0.0064 | | | |
| | | | | | C2 | 0.2245 | 0.0032 | | | |
| | | | | | C3 | 0.3334 | 0.0048 | | | |
| | | B2 | 0.4423 | 0.0280 | C4 | 0.4084 | 0.0115 | | | |
| | | | | | C6 | 0.3333 | 0.0093 | | | |
| | | | | | C7 | 0.2583 | 0.0072 | | | |
| | | | | | C8 | 0.1909 | 0.0040 | | | |
| | | | | | C9 | 0.4606 | 0.0096 | | | |
| | | | | | C10 | 0.3485 | 0.0073 | | | |
| | | | | | C11 | 0.3386 | 0.0758 | | | |
| A2 | 0.5000 | B4 | 0.4479 | 0.2240 | C13 | 0.4462 | 0.0999 | | | |
| | | | | | C14 | 0.2152 | 0.0482 | | | |
| | | | | | C15 | 0.3662 | 0.0610 | | | |
| | | B5 | 0.3333 | 0.1667 | C16 | 0.4331 | 0.0722 | | | |
| | | | | | C17 | 0.2007 | 0.0334 | | | |
| | | | | | C18 | 0.4658 | 0.0510 | | | |
| | | | | | C19 | 0.3571 | 0.0391 | | | |
| | | | | | C20 | 0.1771 | 0.0194 | | | |
| A3 | 0.2817 | B7 | 0.3598 | 0.1014 | C21 | 0.4215 | 0.0427 | | | |
| | | | | | C22 | 0.1942 | 0.0197 | | | |
| | | | | | C23 | 0.3843 | 0.0390 | | | |
| | | B8 | 0.1870 | 0.0527 | C24 | 0.4316 | 0.0227 | | | |
| | | | | | C25 | 0.3681 | 0.0194 | | | |
| | | | | | C26 | 0.2003 | 0.0106 | | | |
| | | | | | C27 | 0.3518 | 0.0449 | | | |
| | | | | | B9 | 0.4532 | 0.1277 | C28 | 0.3211 | 0.0410 |
| | | | | | | | | C29 | 0.3271 | 0.0418 |

| | | | | | | | |
|----|--------|-----|--------|--------|--------|--------|--------|
| | | | | C25 | 0.4746 | 0.0316 | |
| | | B10 | 0.4293 | 0.0665 | C28 | 0.2592 | 0.0172 |
| | | | | | C25 | 0.2662 | 0.0177 |
| A4 | 0.1549 | | | | C34 | 0.4425 | 0.0215 |
| | | B11 | 0.3141 | 0.0487 | C35 | 0.2152 | 0.0105 |
| | | | | | C42 | 0.3423 | 0.0167 |
| | | | | | C28 | 0.2319 | 0.0092 |
| | | B12 | 0.2566 | 0.0397 | C28 | 0.2236 | 0.0089 |
| | | | | | C28 | 0.5445 | 0.0216 |

6. Conclusions and findings

The quality assessment system of student club construction based on the CIPP model successfully constructed in this study provides a scientific and systematic tool for the assessment of student clubs in Chinese universities. The results of the study show that the evaluation system can effectively identify and assess the performance of student societies in different dimensions, and help the university management to formulate more precise development strategies and improvement measures.

The experts who participated in the questionnaire consultation of this study have rich experience in vocational education research and teaching, and all of them have researched and worked in the field of vocational education for more than 10 years, and all of them have experience in supervising the work of student associations. The valid questionnaire recovery rate for both rounds of consultation was 100%, indicating a high degree of enthusiasm on the part of the experts; the authority coefficient $Cr = 0.863$, indicating that the results of the expert consultation were reliable; and the coordination coefficient was 0.436, indicating that the experts' opinions converged and the results of the consultation were usable.

The quality assessment system of university student association construction in China compiled in this study contains 4 first-level indicators, 12 second-level indicators and 36 third-level indicators, and according to the analytic hierarchy process of assigning weights to these indicators, we can find that "Input evaluation" occupies the highest weight among the first-level indicators, with the weight value of 0.5, indicating that sufficient financial support, human resources and institutional construction are needed in the construction of university student associations. 0.5, indicating that the construction of university student associations needs to invest sufficient financial support, human resources and system construction. The second level indicator "Financial Support" has the highest weight, with a weight value of 0.2240, indicating that the transparency of funds, the adequacy of funds and the efficiency of funds management are very important for the development of student organisations. Among the three-level indicators, "Funding Adequacy" has the highest weight, with a weight value of 0.0999, indicating that adequate funding is a key factor in the quality of the construction of a student association.

With future research, this evaluation system is expected to be applied in a wider range of fields, providing solid support for quality assurance in higher education and personal development of students.

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