Influence of Quality Development Over College Students' Entrepreneurial Competency

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Abstract—At present, the entrepreneurship of college students is rarely successfully. It is of great significance to reasonably evaluate college students' entrepreneurial competency, and discuss how to improve their entrepreneurial performance. The existing studies only focus on specific jobs, and emphasize on theoretical research. There is little report on the empirical quantification and effective promotion of the evaluation model, or on the effects of quality development training. Therefore, this paper explores the influence of quality development over college students' entrepreneurial competency. Firstly, the indices of college students' entrepreneurial competency were examined under the effect of quality development. The research contents were combined with the features of the entrepreneurship of college students, the training requirements of quality development, and the current background of society, politics, and economics, producing a reasonable composite evaluation index system. Next, the composite weights of the evaluation indices were solved by the hierarchical structure model and dominant feature recognition model of college students' entrepreneurial competency. On this basis, the dominant feature recognition model was established for college students' entrepreneurial competency under quality development planning. Through experiments, the proposed evaluation index system was proved scientific, and the entrepreneurial competency was evaluated for an entrepreneurial team of college students.

Keywords—quality development, entrepreneurship of college students, entrepreneurial competency

1 Introduction

Quality development training stimulates the personal potential of college students. Through the training, college students become more proactive and skillful in communication, and more capable of overcoming difficulties. In addition, quality development training promotes the teamwork spirit of college students, arouses their interests in entrepreneurship, and improves their psychological qualities, resulting in a good entrepreneurial competency [1-7].

With a good command of professional knowledge, college students are enthusiastic about and motivated for entrepreneurship. The national support policies bring many

opportunities and challenges to their entrepreneurship [8-15]. By starting up a business, college students can apply the various cultural knowledge acquired on campus, and realize their own values and social values [16-18]. According to *China Youth Daily*, the success rate for the entrepreneurship of college students is as low as 1% on average. Thus, it is of great significance to reasonably evaluate college students' entrepreneurial competency, and discuss how to improve their entrepreneurial performance.

Ji [19] studied the training of college students' capabilities of employment and entrepreneurship, and explores the docking platform for college and enterprise talents in the context of Internet Plus. Focusing on the files of college students' innovation ability information, they presented a keyword extraction algorithm based on the graph model to mine the innovation potential of college students.

It is very important to evaluate the innovation and entrepreneurship education for college students. After analyzing the current research of the quality evaluation for innovation and entrepreneurship education, Zhou and Zhou [20] constructed an evaluation index system for the quality of college students' innovation and entrepreneurship education, which covers 21 indices. In addition, an evaluation model was built on extenics, and eight colleges in Ningbo were empirically studied, before providing corresponding suggestions.

With the rapid development of information technology, college students need to master basic professional qualities, as well as a certain innovation and entrepreneurship ability. Otherwise, it is impossible for college students to meet the talent needs of the market, not to mention the requirements of China's development in the current stage. Gao [21] examined how to cultivate college students' innovation and entrepreneurship capability in the era of the Internet, with the hope to aid college education, and enable colleges to train generations of high-quality talents for the rapid development of the society.

There are many challenges to college students' innovation and entrepreneurship. Big data analysis and innovation and entrepreneurship can complete each other's advantages. Against this background, Hu [22] analyzed the concepts and connotations of college students' innovation and entrepreneurship from the angle of economic transformation, and provided the training strategies for college students' innovation and entrepreneurship through big data analysis.

As the Internet gradually penetrates our lives and work, more and more working modes are available. For college students, job hunting is no longer the only way to employment. They can also live a decent life through innovation and entrepreneurship. In this context, Hu [23] emphasized that the Internet Plus offers new possibilities for training college students into innovation and entrepreneurship talents efficiently, and discovered that the merger of colleges provides opportunities for college students to transform into applied talents.

The existing studies on college students' entrepreneurial competency have very similar theoretical natures and connotations. Most scholars only focused on specific jobs, and emphasized on theoretical research. There is little report on the empirical quantification and effective promotion of the evaluation model, or on the effects of quality development training.

Therefore, this paper explores the influence of quality development over college students' entrepreneurial competency. Section 2 examines the indices of college students' entrepreneurial competency under the effect of quality development, and combines the research contents with the features of the entrepreneurship of college students, the training requirements of quality development, and the current background of society, politics, and economics, producing a reasonable composite evaluation index system. Section 3 solves the composite weights by the hierarchical structure model and dominant feature recognition model of college students' entrepreneurial competency, and establishes the dominant feature recognition model for college students' entrepreneurial competency under quality development planning. Through experiments, the proposed evaluation index system was proved scientific, and the entrepreneurial competency was evaluated for an entrepreneurial team of college students.

2 Evaluation model

Quality development training is an experiential learning mode, which evolves from traditional outward training. Facing the entrepreneurship education of college students, the training goal of quality development expands from pure physical training to the learning of cultural knowledge related to entrepreneurship, the improvement of intrinsic qualities, involving psychological training and personality training, and the training of entrepreneurial skills and management/marketing abilities. Through the participation of quality development training, the psychological tolerance of college students is enhanced, the innovative thinking is inspired, and the entrepreneurial leaders and teams are re-positioned.

In view of the traditional theory on the iceberg model, the features of entrepreneurship of college students, and the training requirements of quality development, this paper summarizes college students' entrepreneurial competency into three dimensions (the learning of cultural knowledge related to entrepreneurship, the improvement of intrinsic qualities, involving psychological training and personality training, and the training of entrepreneurial skills and management/marketing abilities), and establishes an iceberg model (Figure 1).

Fig. 1. The iceberg model

Through quality development training, the college students engaged in entrepreneurship will experience a significance improvement in the following indices of entrepreneurial competency:

For the college students engaged in entrepreneurship, the improvement of intrinsic qualities mainly covers three indices, namely, the improvement of personal charisma, the enhancement of psychological quality, and the cultivation of perseverance and dedication spirits. The college students with integrity, affinity, leadership skills, and enterprise spirit are more likely to forge a cohesive entrepreneurial team; the college students, who are confident, optimistic, independent, and tough, are rarely subjected to external interference, or give up in the process of entrepreneurship; the college students, who devote all their energy to entrepreneurship, bear hardships, and stand hard work, are very likely to achieve entrepreneurial success.

For the college students engaged in entrepreneurship, the learning of cultural knowledge mainly involves three indices, namely, the learning of professional knowledge, the learning of management knowledge, and the learning of general knowledge. The college student with much professional and industry knowledge about entrepreneurship can quickly adapt to the changes and development in the field of entrepreneurship; the college students with the knowledge in management, accounting, operation, and marketing can guarantee the normal operation of their start-up companies, and get used to the market rhythm of supply and demand; the college students with knowledge in laws, tax, and policies, as well as various basic cultural knowledge and common sense of life will cope with emergences more aptly, and their companies will be good at resisting risks.

For the college students engaged in entrepreneurship, the training of entrepreneurial skills and management/marketing abilities mainly covers six indices: improvement of innovation ability, improvement of risk management ability, improvement of team-building ability, improvement of marketing ability, improvement of information gathering ability, and improvement of opportunity recognition ability. The college students capable of innovative thinking and reverse thinking are good at solving problems in the key links of the entrepreneurial process, including technology and sales. The college students with a strong capacity of overall planning, clear goals, and the ability to prepare alternative plans, can streamline company management, expose weak links, and make problems easier to solve. The college students, who take the lead and treat everyone fairly in the entrepreneurial process, are more likely to build a harmonious and long-lasting entrepreneurial team. The college students, who fully understand the industry trends, consumer needs, product competitiveness, and product defects, and who choose marketing methods and strategies properly, can obtain profits by marketizing products. The college students, who boast various connections, do well in drawing conclusions and making analysis, and excel in interpersonal communication, are more likely to acquire the latest information about the market or policies, and to solicitate help from cooperative companies or individuals. The college students, who are sensitive to market changes, logical in handling affairs, as well as calm and decisive, tend to identify hidden entrepreneurship opportunities.

Through the above analysis (Figure 2), this paper combines the research contents with the features of the entrepreneurship of college students, the training requirements

of quality development, and the current background of society, politics, and economics, producing a reasonable composite evaluation index system. The college students' entrepreneurial competency needs to be evaluated by the following principles:
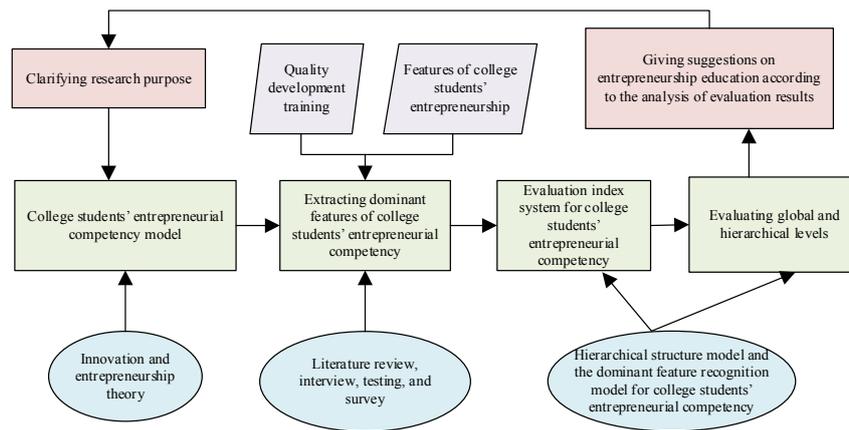
Fig. 2. Evaluation and analysis flow of college students' entrepreneurial competency

1. Clarify the research purpose through the analysis on external environment, and the innovation and entrepreneurship theory, and build an evaluation model for college students' entrepreneurial competency for the new era.
2. Extract the features of the entrepreneurship of college students, and analyze the dominant features, according to the time features and entrepreneurship features of college students, and the requirements of quality development training. Through literature review, interview, testing, and survey, the existing research results are sorted out and summed up. Highlight the prominent problems in view of the current practice of entrepreneurship of college students.
3. Set up a composite evaluation index system, quantify the global and hierarchical results, and provide effective suggestions on the entrepreneurship education of college students. Figure 3 shows the established index system.
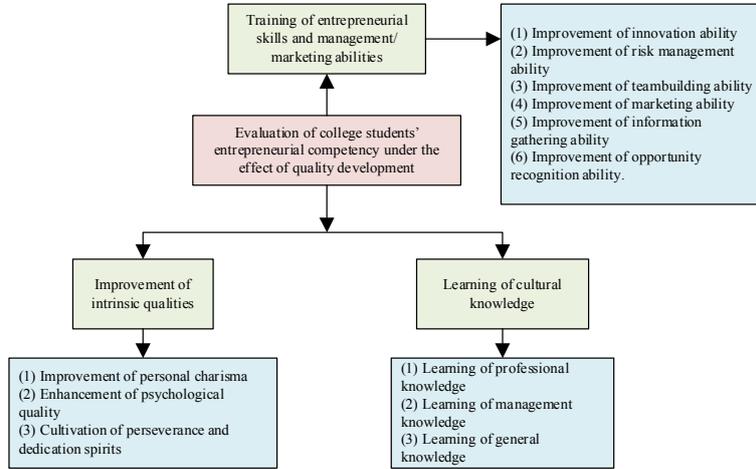
Fig. 3. Composite evaluation index system

3 Dominant feature recognition

3.1 Composite weight

Under the effect of quality development, the evaluation of college students' entrepreneurial competency involves multiple indices. The importance of each index is represented by a weight, which determines the final result of evaluation. Therefore, the key to the evaluation of college students' entrepreneurial competency under quality development is determining the weight coefficients of evaluation indices. The weight coefficients must be sufficiently objective. In this paper, the composite weight of each index is solved by the hierarchical structure model, and the dominant feature recognition model for college students' entrepreneurial competency.

Suppose m college students $O=\{O_1,O_2,...,O_m\}$ are surveyed, and the evaluation index system of entrepreneurial competency contain n indices, $TS=\{TS_1,TS_2,...,TS_n\}$. Let $k_{ij}(i=1,2,...,m; j=1,2,,,n)$ be the score given by college student O_i to the j-th index TS_j. Then, the $m \times n$ scores given by m college students can form an evaluation matrix $EX=(k_{ij})_{m \times n}$.

According to the evaluation needs, the scores of all entrepreneurial competency indices are nondimensionalized, turning $X=(k_{ij})_{m \times n}$ into $R=(a_{ij})_{m \times n}$. The linear mapping can be adopted: $a_{ij}=k_{ij}-k_j^{min}/k_j^{max}-k_j^{min}$. Every element in EX satisfies $0<b_{ij}<1$.

Let ω_{ij} be the weight of the j-th dominant index for the i-th subject. To optimize the index weight for the subject, this paper determines the weight ω_{ij} based on the L2-normdistance. The optimal solution can be expressed as: $a^*_j=(a^*_1,a^*_2,...,a^*_n)'=max_{1 \leq j \leq m}\{a_{ij}\}$, $j=1,2,...,n$. The college students' entrepreneurial competency can be measured by the following function:

$$\delta\left(a_i, a^*\right) = \sqrt{\sum_{j=1}^{o} \omega_{ij}^2 \left(a_i^* - a_i\right)^2} \tag{1}$$

To display the maximum score of entrepreneurial competency for each subject, this paper ranks the college students' entrepreneurial competency by the difference between the score and the preset expectation. Under quality development planning, the dominant features of college students' entrepreneurial competency can be expressed as:

$$\delta_i^2\left(a_i, a*\right) = min\left\{\sum_{j=1}^{n} \omega_{ij}^2\left(a_j^* - a_{ij}\right)^2\right\}$$

$$s.t.: \sum_{j=1}^{n} \omega_{ij} = 1, \omega_{ij} \geq 0 \tag{2}$$

$$i = 1, 2, ..., m; j = 1, 2, ..., n$$

The recognition model was solved by the Lagrange multiplier algorithm. For the indices making the objective function of quality development zero, the index weights add up to one; the weights of the other indices are zero. When the objective function contains no index weight that equals zero, the calculation formula can be expressed as:

$$\omega_{ij}^* = \frac{\mu^*}{\left(a_i^* - a_{ij}\right)^2}, i = 1, 2, ..., m$$

$$\mu^* = \frac{1}{\sum_{j=1}^{o} \frac{1}{\left(a_i^* - a_{ij}\right)^2}} \tag{3}$$

The recognition model (2) has an optimal solution. However, when a college student only prefers one of the entrepreneurial competency indices, i.e., only when $a_{ij0=a*j0}$, and $e \leq j_0 \leq n$, the proposed model will have an extreme solution $\{\omega_{ij0}=1; \omega_{il}=0 | l \neq j_0\}$. Thus, the evaluation index structure $\omega^*_i=(\omega^*_{i1}, \omega^*_{i2}, ..., \omega^*_{ip})^T$, $\omega^*(i=1,2,...,m)$ reflecting the dominant features of college students' entrepreneurial competency manifests the entrepreneurial competency of each subject, under the known evaluation index system, and the known objectives of quality development.

Next, hierarchical analytic process (AHP) was employed to assign a weight to each evaluation dimension of college students' entrepreneurial competency, and the weight of each entrepreneurial competency index. In this way, an analysis model for the entrepreneurial competency of the college student entrepreneurial team can be established, which consists of a goal layer, a criteria layer, and an alternative layer. The goal layer is the specific evaluation problem for college students' entrepreneurial competency. Thus, the three dimensions of college students' entrepreneurial competency, namely, the learning of cultural knowledge, the improvement of intrinsic qualities, and the training of entrepreneurial skills and management/marketing abilities, were taken as the criteria layer; the more specific indices of competency improvement were added to the alternative layer.

The index weights were determined by the AHP in the following steps: Firstly, relevant experts were invited to carry out pairwise comparison between the four dimensions and 12 alternatives in the evaluation index system. The judgement matrix was constructed according to the evaluation scale. Suppose the decision is affected by M evaluation criteria or alternatives. Let x_{ij} be the relative importance of index i to index j. Then, the judgement matrix can be established as:

$$X = \begin{bmatrix} x_{11} & x_{12} & \cdots & x_{1j} & \cdots & x_{1M} \\ x_{21} & x_{22} & \cdots & x_{2j} & \cdots & x_{2M} \\ \cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\ x_{i1} & x_{i1} & \cdots & x_{ij} & \cdots & x_{iM} \\ \cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\ x_{M1} & x_{M1} & \cdots & x_{M1} & \cdots & x_{MM} \end{bmatrix} \tag{4}$$

The importance x_{ij} satisfies the following equation:

$$x_{ij} = 1 / x_{ji} \tag{5}$$

This paper chooses the square root method to compute the eigenvectors and maximum characteristic roots of the eigenmatrix. The product of the elements in each row of the matrix can be calculated by:

$$N_i = \prod_{j=1}^{M} a_{ij} \tag{6}$$

The *M*-th root Q^*_i of N_i can be calculated by:

$$Q_i^* = \sqrt[M]{N_i} \tag{7}$$

The eigenvector of the matrix is the vector Q obtained by normalizing Q^*_i:

$$Q_i = \frac{Q_i^*}{\sum_{i=1}^{M} Q_i^*} \tag{8}$$

$$Q = \begin{bmatrix} Q_1 & Q_2 & Q_3 & \cdots & Q_M \end{bmatrix}^T \tag{9}$$

The maximum characteristic root can be calculated by:

$$\mu_{max} = \sum_{i=2}^{M} \frac{XQ_i}{MQ_i} \tag{10}$$

The weights of the evaluation indices, which were obtained by the hierarchical structure model and the dominant feature recognition model, were superimposed, and averaged to obtain the composite weights of the evaluation indices for college students' entrepreneurial competency.

3.2 Dominant feature recognition model

The proposed evaluation index system for college students' entrepreneurial competency is a manifestation of the hierarchy. Let h_{ilj} be the index value of college student O_i; h^*_{lj} be the college student's preference for entrepreneurial competency corresponding to the index. Under the quality development planning, the dominant feature recognition model for college students' entrepreneurial competency from the goal layer to the alternative layer can be expressed as:

$$min\delta_i\left(h_i,h^*\right)=\sum_{l=1}^{b}\sum_{j=1}^{x_l}\omega_{lj}^2\left(h^*_{lj}-h_{ilj}\right)^2$$

$$s.t.\sum_{l=1}^{b}\sum_{j=1}^{x_l}\omega_{lj}=1 \tag{11}$$

$$\omega_{lj}\geq 0, l=1,2,...,b, j=1,2,....,x_l$$

The dominant feature recognition model from the criteria layer to the alternative layer can be given as:

$$min\delta_{il}^2\left(h_i,h^*\right)=\sum_{j=1}^{x_l}\mu_{lj}^2\left(h^*_{lj}-h_{ilj}\right)^2$$

$$s.t.\sum_{j=1}^{x_l}\mu_{lj}=1 \tag{12}$$

$$\mu_{lj}\geq 0, j=1,2,....,x_l$$

The optimal solution $\mu^*_{il}=(\mu^*_{il1},\mu^*_{il2},...,\mu^{*xl}_{il})$ to the model is based on the index values of subject O_i. The dominance of O_i in the entrepreneurial competency on the alternative layer can be judged by the l-th index of the criteria layer. The subject can be expressed as $(Y^*_{il})^2=\sum_{lj=1}^{x}(\mu^*_{ilj})^2(a^*_{lj}-a^*_{ilj})^2$. Based on the index values of subject O_i, the dominant feature recognition model from the angle of the goal layer can be expressed as:

$$min\delta_{il}^2\left(h_i,h^*\right)=\sum_{j=1}^{x_l}\mu_{lj}^2\left(h^*_{lj}-h_{ilj}\right)^2$$

$$s.t.\sum_{j=1}^{x_l}\mu_{lj}=1 \tag{13}$$

$$\mu_{lj}\geq 0, j=1,2,....,x_l$$

Through cluster analysis, this paper processes the dominant features of the college students' entrepreneurial competency on each layer of indices. Each class of goal layer indices is denoted as l_x=1, 2,...,l_X. Each class of criteria layer indices is denoted as l_y=1,2,...,l_Y. Based on the recognized dominant features, the dominance of indices on each layer can be obtained. For the l-th criteria layer index, the dominance under the weight structure of the l_y-th class can be expressed as:

$$b_{lly} = \frac{1}{m} \sum_{i=1}^{m} \sqrt{\sum_{j=1}^{o_n} \left(\mu_{ill_y}^* \right)^2 \left(h_{ijl} - h_{jl}^* \right)^2}, \quad j = 1, 2, ..., o_n \tag{14}$$

For the goal layer indices, the dominance in each class can be calculated by:

$$c_x = \frac{1}{m} \sum_{i=1}^{m} \sqrt{\sum_{l=1}^{n} \left(\lambda_{l_x}^* \right)^2 \left(b_{il} - b_l^* \right)^2} = \frac{1}{m} \sum_{i=1}^{m} \sqrt{\sum_{l=1}^{n} \sum_{j=1}^{o_n} \left(\lambda_{l_x}^* \right)^2 \left(\mu_{il}^* \right)^2 \left(h_{jil} - h_{jl}^* \right)^2} \tag{15}$$

4   Experiments and results analysis

This paper defines the common method variance (CMW) as the system error arising from the intrinsic features of data source, survey environment, and research purpose for the evaluation of college students' entrepreneurial competency. The CMW can be viewed as the artificial common variance between the evaluation result of college students' entrepreneurial competency and the reference value. In this paper, the evaluation samples of college students' entrepreneurial competency undergo the CMW test, by the Harman's one-factor test. That is, all evaluation indices were subjected to the same exploratory factor analysis. The CMW test results on the evaluation data are shown in Table 1. The extracted principal components could explain 75.24% of all evaluation indices. Therefore, our evaluation indices do not have a serious CMW, and the evaluation data can be further analyzed.

Table 1. CMW test results on the evaluation data

Component		1	2	3	4	5	6
Initial eigenvalue	Total	11.058	4.052	3.168	3.058	2.103	1.926
	% of variance	25.184	9.638	7.421	6.825	4.192	4.368
	Cumulative % of variance	27.835	38.295	42.058	51.284	58.968	55.263
Extracted sum of squared loadings	Total	13.052	4.157	3.629	3.153	2.684	1.928
	% of variance	23.168	9.475	7.062	6.184	4.627	4.905
	Cumulative % of variance	28.192	37.428	44.518	52.639	55.715	56.283
Component		7	8	9	10	11	12
Initial eigenvalue	Total	1.481	1.827	1.936	1.213	1.447	3.122
	% of variance	3.052	3.948	2.174	2.938	3.412	7.561
	Cumulative % of variance	61.482	66.937	67.481	72.053	63.582	47.466
Extracted sum of squared loadings	Total	1.052	1.697	1.362	1.485	1.442	3.598
	% of variance	3.627	3.095	2.618	2.472	3.797	7.487
	Cumulative % of variance	63.015	66.257	69.315	72.168	65.685	48.562

Drawing on the analysis in the preceding section, the weights and consistency test results of the alternative layer can be obtained (Table 2).

Table 2. Weights and consistency test results of the alternative layer

	Eigenvector	Maximum characteristic root	CI	RI	Consistency test results
Improvement of personal charisma	0.5384				*CR*=0.0152
Enhancement of psychological quality	0.1457	3.8241	0.0157	0.5938	*CR*<0.3 passing the consistency test
Cultivation of perseverance and dedication spirits	0.3926				
Learning of professional knowledge	0.6271				*CR*=0.0418
Learning of management knowledge	0.1295	3.9153	0.0362	0.5285	*CR*<0.5 passing the consistency test
Learning of general knowledge	0.2853				
Improvement of innovation ability	0.1485				
Improvement of risk management ability	0.2953				
Improvement of teambuilding ability	0.5748				*CR*=0.0625
Improvement of marketing ability	0.6145	3.4286	0.0849	0.5618	*CR*<0.2 passing the consistency test
Improvement of information gathering ability	0.1842				
Improvement of opportunity recognition ability	0.5413				

Note: CR and RI are short for consistency ratio and random consistency index, respectively.

As shown in Table 2, the *CR* values (0.0152) of improvement of personal charisma, enhancement of psychological quality and cultivation of perseverance and dedication spirits were smaller than 0.3, passing the consistency test. The *CR* values (0.0418) of learning of professional knowledge, learning of management knowledge, and learning of general knowledge were smaller than 0.5, passing the consistency test. The *CR* values (0.0625) of improvement of innovation ability, improvement of risk management ability, improvement of teambuilding ability, improvement of marketing ability, improvement of information gathering ability, and improvement of opportunity recognition ability were smaller than 0.2, also passing the consistency test. Finally, the composite weights of the evaluation indices can be calculated for college students' entrepreneurial competency (Table 3).

Table 3. Calculated composite weights

Criteria layer	Weight	Alternative layer	Weight	Composite weight
Improvement of intrinsic qualities	0.2521	Improvement of personal charisma	0.2162	0.0545
		Enhancement of psychological quality	0.5385	0.1357
		Cultivation of perseverance and dedication spirits	0.2453	0.0618
Learning of cultural knowledge	0.3229	Learning of professional knowledge	0.4182	0.135
		Learning of management knowledge	0.3248	0.1048
		Learning of general knowledge	0.257	0.0829
Training of entrepreneurial skills and management/marketing abilities	0.425	Improvement of innovation ability	0.1842	0.0782
		Improvement of risk management ability	0.1748	0.0742
		Improvement of teambuilding ability	0.1526	0.0648
		Improvement of marketing ability	0.1955	0.083
		Improvement of information gathering ability	0.1347	0.0572
		Improvement of opportunity recognition ability	0.1582	0.0672

Based on the evaluation data on college students' entrepreneurial competency, this paper quickly divides the scores of college students' entrepreneurial competency into different classes through rapid clustering. During the clustering, the dominant features of college students' entrepreneurial competency were divided into classes. Table 4 shows the clustering results for criteria layer indices.

Table 4. Clustering results for criteria layer indices

Class	Weight structure			Number of students in the class	Proportion in all students
	Improvement of intrinsic qualities	*Learning of cultural knowledge*	*Training of entrepreneurial skills and management/marketing abilities*		
1	3.625	2.156	2.859	74	51.2
2	0.842	1.639	2.453	26	17.4
3	0.251	0.326	9.158	26	18.4
4	0.625	7.952	1.485	22	16.3

Table 5 summarizes the memberships for entrepreneurial competency of a college student entrepreneurship team. It can be seen that, the entrepreneurial competency was strongly strong for member A, slightly strong for member B, ordinary for members C and D, and slightly weak for member E. These evaluation results are basically consistent with the entrepreneurial competency and development situation of the current members of the team: A and B are team leaders with relatively strong entrepreneurial performance. The other members performed slightly worse in entrepreneurship, and may leave the team and find jobs. The main reason is that the other members lack dominant features of entrepreneurial competency, which directly support further entrepreneurial activities.

Table 5. Summary of memberships for entrepreneurial competency of a college student entrepreneurship team

Code		A	B	C	D	E
Comment membership	Strongly strong	0.3269	0.2518	0.2963	0.0748	0.1329
	Slightly strong	0.2715	0.3748	0.2961	0.2264	0.1926
	Ordinary	0.1436	0.1924	0.3637	0.3169	0.2849
	Slightly weak	0.0749	0.0485	0.08	0.2635	0.2846
	Strongly weak	0.0748	0.1362	0.0948	0.1621	0.3743

5   Conclusions

This paper explores the influence of quality development over college students' entrepreneurial competency. After a thorough discussion about the indices of college students' entrepreneurial competency, the authors designed a reasonable composite evaluation index system, which combines the research contents with the features of the entrepreneurship of college students, the training requirements of quality development,

and the current background of society, politics, and economics. Based on the hierarchical structure model and dominant feature recognition model of college students' entrepreneurial competency, the composite weights of the evaluation indices were solved, and the dominant feature recognition model was established for college students' entrepreneurial competency under quality development planning. Through experiments, the CMV of the evaluation data was tested, the weights of criteria layer indices were calculated, the consistency test results were obtained, and the composite weights were solved. The results demonstrate the scientific nature of the proposed evaluation model. During the clustering, the dominant features of college students' entrepreneurial competency were divided into classes. Then, the authors summed up the memberships for entrepreneurial competency of a college student entrepreneurship team.

6   References

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