Research Article

Innovative Entrepreneurship Education of College Students Based on Synergism and Random Matrix

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This paper adopts the method of synergetic theory fused with a random matrix to conduct in-depth research and analysis on the innovation and entrepreneurship education of college students, discusses the existing problems, and develops ways of college students’ entrepreneurship education from the perspective of synergetic students. The development history of entrepreneurship education of college students is explained, the development of entrepreneurship education in case institutions is introduced and the synergistic subjects of college students’ entrepreneurship education are introduced, and the necessity of carrying out college students’ entrepreneurship education is analyzed. The mechanism of cooperation mechanism of total budget management is studied from three perspectives of organizational cooperation, information cooperation, and resource cooperation respectively. From the perspective of internal and external collaborative training platforms, the idea of improving college students’ entrepreneurship education is put forward. Among them, colleges, teachers, and college students form an internal system for the development of entrepreneurship education, and the three are synergistically dependent on each other and influence each other. Then, the problems in entrepreneurship education are analyzed, including weak teachers in entrepreneurship education in colleges and universities, systematic and professional entrepreneurship education to be improved, insufficient internal drive-in entrepreneurship education in colleges and universities, and insufficient initiative of college students to participate in entrepreneurship education. Finally, the ways to solve the existing dilemmas of entrepreneurship education of college students from the perspective of synergism are proposed, including improving the initiative of college students and the atmosphere of social and cultural environment, constructing internal and external platforms for entrepreneurship education of college students, and evaluating and giving feedback to entrepreneurship education of college students so that colleges and universities can better promote and carry out entrepreneurship education.

1. Introduction

One of the important requirements put forward by the state for the reform of higher education is to make efforts in cultivating the innovation spirit and improving the innovation and entrepreneurship ability of college students [1]. In recent years, higher education has entered the stage of popularization, the employment pressure on college students has been increasing, the state encourages college students to develop their innovation ability, puts forward higher requirements for their innovation and entrepreneurship ability, and encourages them to choose to start their own business. Entrepreneurship education for college students is of great significance to stimulate college students’ enthusiasm for entrepreneurship and improve their innovation ability [2]. Therefore, from the three aspects of promoting the national strategic requirement of “mass entrepreneurship and innovation,” improving the level of higher education, and increasing the employment “weight” of college students, the development of college entrepreneurship education becomes a necessary way for colleges and universities. Under the perspective of collaborative students, we analyze the existing problems of mutual assistance and linkage between schools, students, government, and society in the process of entrepreneurship education for college students from two different central points of “schools” and “individual students,” and discuss the parts of each subject to be improved in this process. We discuss the
parts of the process that need to be improved. From the perspective of collaborative students, we propose some suggestions to improve entrepreneurship education for college students, to help each body gradually improve its shortcomings and play a joint role in improving entrepreneurship education in college [3]. For college students, it will make them have an entrepreneurship education, realize that entrepreneurship has become one of the employment options for college students after graduation, and continue to explore the road of improving their innovation and entrepreneurship ability, dare to "take the new path of entrepreneurship" when they are employed, and improve their happiness.

In the era of full media, it is especially urgent and important to give full play to the role of network education in colleges and universities. Universities are responsible for delivering high-quality talents to the country and the society, especially new people of the times with firm political stance, excellent moral quality, and solid professional quality, which requires universities to always adhere to the central link of moral education, focus on the new environment of ideological and political work, that is, constantly changing and developing, fully understand the important role of network culture construction in comprehensively improving the ideological and political quality of college students [4]. Make the network ideological and political work of colleges and universities gradually extend and incline to the new media and each networking platform, follow the trend, continuously promote the informatization and network nation of higher education, improve the construction of network platform of college thinking and politics, network team construction, excellent network culture construction and network technology development, etc., seize the network, seize the youth, continuously try and innovate new ways of network education, explore and construct the network education of colleges and universities [5]. The scientific and long-term mechanism of network education in colleges and universities is explored and constructed to improve the relevance, effectiveness, and flexibility of the implementation methods of network education.

The environment of college students' entrepreneurship education includes social and humanistic environment, economic environment, policy environment, and technical environment. The study of the cooperative mechanism of college network education, provides scientific and reasonable mechanism construction countermeasures for college network education and helps the subjects of college network education to carry out effective demand collection, scientific decision-making, resource sharing, cooperative education, and feedback evaluation, promotes the full release and stimulation of innovative elements such as technology, capital, information, and talents in college network education, and makes the subjects, objects, and talents of college network education to be more effective. The main body, object, intermediary and ring body of university network education can accurately grasp the demand, obtain resources efficiently and exchange information in time, to form a collaborative education mechanism with the same direction, top, and bottom linkage, and complementary advantages, and effectively improve and promote the organization, cooperation, and effectiveness of university network education.

2. Related Work

The academic research on ideal belief education of college students has gone through a long development process from ideal belief to ideal belief education and then to ideal belief education of college students in such a research order, advancing layer by layer [6]. One is the research on the synergistic theory between subjects, which mainly emphasizes the synergistic interaction between educational subjects and objects. Neumeyer et al. point out that the dialogue of equality is the cooperation between subjects, which contains reflective and interactive elements, and the subjects are jointly engaged in the reconstruction of meaning and spirituality and reaching positive influence and understanding between each other [7]. Qi and Wang expressed that cooperation in the process of ideological and political education is a way to reflect the interaction between the subject and the object [8]. Scholars have a slightly different understanding of entrepreneurship, and the research content of the concept of entrepreneurship has been enriched, from the concept of entrepreneurship at a narrow level to the discourse of intrapreneurs at a broad level, from the tendency to the discourse of creation and innovation to the grasp of the timing of entrepreneurship [9].

Regarding the objectives of entrepreneurship education for college students, the European Commission has been making efforts to promote entrepreneurship education for college students for many years, arguing that stimulating students' interest in entrepreneurship and promoting students' active exposure to the business world, as well as developing students' entrepreneurial qualities to make them have a positive attitude toward their self-employment employment status [10]. It is essential to increase the number of practical courses in entrepreneurship education so that students can participate in entrepreneurial practices in contact with customers, participate in entrepreneurship club activities to practice their skills, take part in entrepreneurship competitions, and listen to and benefit from entrepreneurial lectures [11]. Sebok et al. consider shaping entrepreneurship as a fundamental goal [12]. The accomplishment of this goal is based on achieving specific objectives including enhancing college students' entrepreneurial awareness, cultivating the psychological qualities of entrepreneurs, and imparting entrepreneurial knowledge [13].

With the improvement of the education system and the deepening of the understanding of double-entrepreneurship education, some regions have shifted the focus of double-entrepreneurship education to lifelong education, and the integration of double-entrepreneurship education with majors is a hot topic in research. The system only changes in quantity in the general state, but when the control
parameters in it reach a certain value, the system will enter a new state with a sudden change that distinguishes it from the one between. The analysis of this sudden change reveals that there is no qualitative change in the control parameters of the system, and the new state of the system emerges due to the self-organization of the system under the influence of certain external conditions. In this regard, we call such a system a self-organized system.

3. Analysis of College Students’ Innovation and Entrepreneurship Education under the Collaborative Vision

In the process of entrepreneurship education, college students give full play to their initiative, pay more attention to entrepreneurship education in their minds, understand the original purpose of arranging entrepreneurship education courses in colleges and universities, and put entrepreneurship education courses on the same level of importance as other courses [14]. Cooperate with teachers in the study of entrepreneurship education and fully share the educational resources of teachers. When doing practical learning on the enterprise platform, they use the practical platform of entrepreneurship education to fully exchange information with enterprises, understand the advantages of enterprises, and participate in practical learning by combining their specialty and interest points, as shown in Figure 1.

And set up an on campus entrepreneurship education development fund to provide research sites for college teachers and promote the development of entrepreneurship education teaching materials by college teachers. Reasonably arrange college entrepreneurship education courses for students, provide classroom teaching for students, and build an on campus entrepreneurship education practice platform. Specifically, teachers include on campus professional teachers and hired off-campus entrepreneurial successes or entrepreneurs. Among them, the professional teachers in the school are mainly responsible for imparting theoretical knowledge about entrepreneurship education to students, bringing the latest research results and practical experience and international innovative academic development trends into the classroom, and guiding students to carry out practical courses of entrepreneurship education.

Universities should coordinate with the government and enterprises externally, carry out on campus entrepreneurship education under the government’s requirement of vigorously promoting innovation and entrepreneurship, and exchange information and cooperate with the government to obtain external funding and policy support from the government [15].

On the one hand, entrepreneurs with high levels of mindfulness can gain deeper understanding and insights from failure, start thinking about how to change the stigma and social stigma brought about by failure, challenge the public’s negative perception of failure, and ultimately transform failure into A positive experience, entrepreneurial resilience is the result of a positive experience of failure. In addition, entrepreneurs with high mindfulness are also more capable of problem-solving. When encountering bad social relations, they are unwilling to be trapped in such a situation and believe that they can open a new path in the predicament, so they adapt to the crisis. Stronger capabilities and enhanced entrepreneurial resilience.

In this paper, the ideal belief education collaborative education mechanism is to integrate multiple subjects and multiple ideal belief education resources around the goal of ideal belief education and to build a mechanism, in which different subjects and multiple elements collaborate and complement each other’s advantages. While emphasizing the importance of ideal and belief education in the new era, General Secretary Xi Jinping has also repeatedly stressed the importance of establishing a cooperative education mechanism for ideal and belief education. Technology drives innovation, that is, innovators take technological research and development results out of the laboratory to commercialize them and go to the market. At present, our ideal and belief education collaborative education mechanism should be guided by certain goals and carry out collaborative management, learning, and education activities.

In this model, technological development drives technological innovation, and breakthroughs in science and technology are decisive factors in the generation and development of technological innovation activities and are the source driving force of technological innovation [16]. In other words, science and technology innovation promotes a linear process, which starts from technology research and development to experimental manufacturing activities and then to products or processes, and finally to the market. Early technology development practices in Western countries prove that technology drives innovation, i.e., innovators take technology R&D results out of the laboratory to productize and go to the market, such as the invention of the laser, artificial nylon, and semiconductor, as shown in Figure 2.

The evaluation and feedback of college students’ entrepreneurship education is an important part of the collaborative development of college students’ entrepreneurship education.

This paper divides the construction of a collaborative cultivation platform for college students’ entrepreneurship education into the internal and external collaborative systems and proposes the idea of improving college students’ entrepreneurship education from the perspective of internal and external collaborative cultivation platforms. Among them, colleges and universities, teachers, and college students form the internal system of entrepreneurship education development, and the three are synergistically dependent on each other and influence each other [17]. Manual removal of this anomaly hinders the application of this method when it is used in production. Another approach is to set the amplitude threshold, and when the amplitude value of the pulse data is greater or less than a certain value, it will be removed directly, but due to the change in the scale of the pulse signal data, or the change in its proportion, the amplitude threshold will be difficult to determine. It
includes the cooperation between universities and college students, the cooperation between universities and teachers, and the cooperation between teachers and college students. It includes the synergistic cooperation between universities and government, the cooperation between universities and enterprises, and the cooperation between universities and other universities, as shown in Figure 3.

However, at present, due to the misunderstanding of the purpose of entrepreneurship education in colleges and universities, they believe that the most important purpose of entrepreneurship education is to cultivate entrepreneurial talents in society, and the emergence of entrepreneurs has much to do with personal talents and conditions.

For the government, it thinks that the main duty of individuals is to launch policies related to entrepreneurship education, and they are not active enough in coordinating universities and enterprises to build entrepreneurship education platforms.

The development of college students' entrepreneurship education is also inseparable from the general environment of society [18].

4. Random Matrix Construction for Education Data

A stochastic matrix is defined as a matrix form consisting of at least one random variable element. The method models the extended state of the target as an ellipse and represents the size and direction of the ellipse with a two-dimensional positive definite random matrix, as shown in the following equation:

\[ M = \begin{bmatrix} \cos(\theta) & \sin(\theta) \\ \sin(\theta) & -\sin(\theta) \end{bmatrix} \begin{bmatrix} a^2 & 0 \\ 0 & -b^2 \end{bmatrix}, \]

where the first random matrix represents the undirected (i.e., the direction is parallel to the x-axis of the two-dimensional Cartesian coordinate system) ellipse and \( a \) and \( b \) represent the long and short semiaxes of the ellipse, respectively. The second random matrix is the general form of the first matrix (the first matrix is rotated in any direction), and the direction of this matrix is the same as the direction of the matrix eigenvector, and the long and short axes can be obtained by squaring the eigenvalues of this matrix.
The interaction of mindfulness and the cost of entrepreneurial failure demonstrates the impact on entrepreneurial resilience, which further has positive implications for the performance of entrepreneurs’ new ventures. Combining the above assumptions, on the one hand, entrepreneurial failure cost affects re-entrepreneurship performance through the mediating effect of entrepreneurial resilience; on the other hand, mindfulness can moderate the relationship between entrepreneurial failure cost and entrepreneurial resilience. Thus, the model of entrepreneurial failure cost and re-entrepreneurship performance can be further expressed as a moderated mediation model.

After graduation, 62.07% of the college students are looking forward to starting a business, and 58.62% are looking forward to entrepreneurship education, but only 17.24% of the college students have received entrepreneurship education. Specifically, entrepreneurial resilience mediates the effect of entrepreneurial failure cost on re-entrepreneurship performance, but this mediating effect can be moderated by mindfulness. When the level of mindfulness is high, entrepreneurs are more aware of various influencing factors in their environment, and their cognition is more flexible. The cost of entrepreneurial failure will enhance the role of entrepreneurial resilience, and entrepreneurial resilience is further conducive to re-entrepreneurial performance. Conversely, when the level of mindfulness is low, the cost of entrepreneurial failure has a relatively weak promotion effect on entrepreneurial resilience, and a lower level of entrepreneurial resilience has a weaker effect on improving re-entrepreneurship performance.

In the random matrix-based extended state Bayesian estimation framework, the random matrix is described by the inverse Wishart distribution [19]. In addition, the target motion state and the measurement rate state are described by Gaussian and gamma distributions, respectively.

\[
N(x, m, P) = P^{1/2} e^{-1/2(x-m)^T P^{-1}(x-m)}. \tag{2}
\]

When the extended target measurements are distributed in a certain space in a cluttered and disordered manner, the extended state of the extended target can usually be approximated by an ellipse, i.e., elliptical extended target tracking, where the range circled by the ellipse indicates the spatial location occupied by the extended target.

\[
N = (x, m, X), \tag{3}
\]

where \(y, a, \) and \(X\) denote the measurement rate state, motion state, and extended state of the extended target, respectively, all contained in the augmentation term \(S\), \(y\) is a scalar that obeys the gamma distribution, and the vector \(a\) can be modeled as \([x, y, v, o, w]\), \([x, y]\) denotes the two-dimensional coordinate position in the motion state of the target, and \(v, w\) denotes the velocity, direction, and steering rate of the target, respectively. When the spatial distribution of multiple measurements of the extended target can roughly reflect the target shape, if only one ellipse is used to describe its extended state, the information loss is large and the target information contained in the extended target measurements cannot be fully explored [20]. At this time, using multiple ellipses to describe its complex shape can effectively capture...
more details of the target shape. Based on the full probability theory and Bayesian estimation framework, the posterior state probability density function of the \(i\)th subellipse at time \(k\) is as follows:

\[
p(\xi_k | Z^k) = \sum_{l=1}^{n^k} p(\xi_k | E^k, Z^k)\mu_k. \tag{4}
\]

To accomplish the curriculum objectives of multi-level entrepreneurship education, it is necessary for teachers who meet the competencies of each curriculum to take up the corresponding teaching tasks, and “dual-teacher” requirements are imposed on the teachers of entrepreneurship education. Specifically, teachers include professional teachers on campus and successful entrepreneurs outside the university. Among them, on-campus professional teachers are mainly responsible for teaching student’s theoretical knowledge about entrepreneurship education, bringing the latest research results and practical experience as well as international innovative academic development trends into the classroom, and guiding students to conduct practical courses on entrepreneurship education. The proportion of students, who believe that it is necessary to carry out entrepreneurship education in colleges and universities, is 72.41\%, and 22.99\% of students believe that it should be open to students, who are willing to start a business, but there are still 27.59\% of students who have not received entrepreneurship education during their college years.

\[
G_{jk} [h] = \prod_{i=1}^{M_{jk-1}} G_{l,k} [h] \cdot \prod_{z_{i}} G_{u,k} [h]. \tag{5}
\]

One approach to such anomalous pulse data are usually to use a manual removal approach by viewing the image that shows such an anomalous graph to see that there is an anomaly like this and then manually removing it. However, in practical engineering applications, a large volume of data tends to add a huge amount of work, so the manual removal
of the anomaly hinders the application of the method when it is used in production. Another approach is to set the amplitude threshold, when the pulse data amplitude value is greater than or less than a certain value, it will be removed directly, but because the pulse signal data scale changes or its proportional changes will lead to the problem of poor determination of the amplitude threshold, and such a direct one-size-fits-all approach is slightly crude, so it is necessary to find new processing means to automatically filter such abnormal pulse data [21].

The lectures of successful entrepreneurs and entrepreneurs outside the school are mainly in the form of stage lectures and reports and participate in the teaching process of practical courses of entrepreneurship education to help students understand the real situation of entrepreneurship so that students’ understanding of entrepreneurship does not only stay in the stage paper, as shown in Figure 4.

Colleges and universities can also only improve the level of teachers of entrepreneurship in colleges and universities with the support of socially relevant enterprises, social figures, and the government, and the society and the government should actively cooperate with colleges and universities to provide guarantees for improving the level of teachers of entrepreneurship education.

\[ x_{i,j} = \frac{x_{i,j} - x_i}{\sqrt{\frac{\sigma(x_i)}{\sigma(x_j)}}} \tag{6} \]

With further analysis, we can also conclude that the necessary condition for the member filter potential unbiased estimation is that the total target potential of Equation (6) is not greater than 1 [22]. Given that the member filter achieves the potential unbiased estimation by removing the 3rd term and the 3rd term is identical to the 1st term, we can reasonably remove the 1st term to achieve the potential unbiased estimation, i.e., remove the redundant potential estimate of the missed part of the Member filter to obtain the potential unbiased estimate.

5. Analysis of the Results

5.1. Results of College Students’ Need for Entrepreneurship Education. To investigate the demand for entrepreneurship education among college students, we randomly distributed 100 questionnaires to the students of the University of H in the form of an online questionnaire and physical questionnaire, including 50 online questionnaires and 50 physical questionnaires, and collected 87 valid questionnaires. After analyzing the questionnaires, the following results were obtained: 62.07% of the college students were looking forward to starting their own business after graduation, 58.62% were looking forward to getting an entrepreneurship education but only 17.24% of the college students had received entrepreneurship education, as shown in Figure 5. The percentage of students, who do not know very much and do not know about entrepreneurship education, is 49.42%, and the percentage of those, who know very much and know more about entrepreneurship education, is only 5.75%.

The collected 252 samples were imported into SPSS software for descriptive statistical analysis. Judging from the gender characteristics of the surveyed entrepreneurs, men accounted for 56.7% and women accounted for 43.3%, with little difference in the proportion of men and women. From the age of the respondents, the age distribution of entrepreneurs is mainly concentrated in 26–35 years old and 36–35 years old. And 45 years old, accounting for 46.4% and 30.2%, respectively, this age group has high entrepreneurial passion and the ability to resist risks. Judging from the educational level of the respondents, most of them have bachelor degrees, accounting for 63.9%, followed by college degrees and master degrees or above, accounting for 18.7% and 12.7%, respectively. technology and technology.

Based on the efforts to improve the ideological cognition and social environment atmosphere of college students’ entrepreneurship education, build the internal and external collaborative development platform of college students’ entrepreneurship education, and regard the evaluation and feedback link of college students’ entrepreneurship education as an important part of the coordinated development of college students’ entrepreneurship education. In terms of industries, the manufacturing industry accounts for 17.9%, the wholesale and retail industry accounts for 6.7%, the financial industry accounts for 17.5%, the accommodation and catering industry accounts for 21%, the Internet industry accounts for 22.2%, the construction industry and real estate account for 7.9%, and other industries account for 6.7%. Entrepreneurial activities are mainly concentrated in the accommodation and catering industry and the Internet computer industry. Judging from the years of establishment of new ventures, they mainly concentrated in 1 to 3 years and 3 to 5 years, accounting for 30.2% and 32.9%, respectively the respondents’ new ventures are in a stage of development and have certain development trends and conditions, suitable for this study. In terms of the number of entrepreneurship, more than half of the respondents have experienced 2 startups, followed by 1 and 3 startups, accounting for 20.2% and 23.4%, respectively. The survey respondents of the sample meet the research background of entrepreneurship after failure.

The proportion of students who think it is necessary to carry out entrepreneurship education in universities is 72.41%, 22.99% of students think it should be opened for students, who are willing to start their own business, but still, 27.59% of them do not get entrepreneurship education during their college years. Encourage college students to develop innovation ability, put forward higher requirements for college students’ innovation and entrepreneurship ability, and encourage college students to choose self-employment. There are 48.28% of students who expect to receive entrepreneurship education in college in the form of a part of career guidance for college students, 14.94% expect to receive entrepreneurship education in the form of compulsory courses, and 27.59% receive entrepreneurship education in the form of elective courses.

Moreover, university teachers who have rich entrepreneurship knowledge usually have strong comprehensive quality ability themselves, and some of them will choose to
start their enterprises instead of serving as university teachers when conditions are ripe, further aggravating the shortage of teachers for entrepreneurship education. In addition, there are differences in the conditions of running colleges and universities in China and the social environment of the regions they are located, and some schools cannot meet the conditions of hiring part-time teachers from outside the university as school teachers, as shown in Figure 6.

Content validity mainly refers to whether the content of the measured items can fully and accurately cover the target constructs to be measured, and whether the measured items are representative. This study uses mature measurement scales in related fields at home and abroad. After repeated use in many studies, the stability and accuracy of the measurement items are confirmed, and they have good content validity. Construct validity refers to whether the data structure obtained by the measurement tool is consistent with the expected results of the measurement construct in this study. This study uses exploratory factor analysis and confirmatory factor analysis to reveal whether the internal structure of variables is consistent with the theoretical relationship of the study.

In this paper, the reliability test was conducted by SPSS22.0. The Cronbach coefficients of all dimensions are greater than 0.9, which proves that the questionnaire has high reliability and credibility. Help each subject to gradually improve their own deficiencies, and play a synergistic role in jointly improving university entrepreneurship education. The representativeness of the questionnaire questions was analyzed by factor analysis, i.e., validity analysis, and the analysis of the validity of the questionnaire in this paper was conducted by factor analysis, and the obtained KMO values and cumulative contribution rates are shown in the table. Testing the reliability and validity of the questionnaire shows that the reliability and validity of the questionnaire meet the standard, and the questionnaire can reflect the real emotional perceptions and actual views of the subjects to a certain extent.

5.2. Analysis of Synergetic Fusion Random Matrix Model.
As mentioned in the previous section, the current dual innovation education received by tourism students in colleges and universities is far from adequate, and a large number of schools have not yet offered relevant courses,
which is not in line with the general background of innovation and entrepreneurship and also disconnected from the talents needed by the tourism industry in the future, and the necessity of implementing innovation and entrepreneurship education in college tourism majors are undoubtedly. However, at the same time, we must also face the problem of limited curriculum arrangement, the curriculum of college and university is compact, both general education courses and professional courses, and the students in the first year of high school have just entered the stage of college and university, the first time to receive professional education, the foundation is weak. It may even seriously affect the learning effect of professional education and even general education.

On the other hand, as a place for students to learn and grow, the cultural environment of the school is an important factor affecting students’ development. It is necessary to transport newcomers of the era with a firm political stance, strong moral character, and solid professional qualities. This requires colleges and universities to always adhere to the central link of morality and talent cultivation, and focus on the constantly changing and developing new environment for ideological and political work. The school can create a campus cultural environment with the characteristics of innovation and entrepreneurship by holding innovation competitions, entrepreneurship festivals, setting up maker spaces and club development centers, etc., to stimulate students’ interest in learning innovation and entrepreneurship, cultivate students’ communication and expression, organizational planning and other dual-creative abilities, and at the same time, it can enrich students’ lives and benefit their physical and mental development, as shown in Figure 7.

The curriculum at the college level is tight and students’ learning interests are different, so while the basic dual-creation education is conducted, some students will have higher needs for innovation and entrepreneurship. With the help of professional elective courses, students can further improve on the basic education of innovation and entrepreneurship, and gradually learn interdisciplinary knowledge of innovation and entrepreneurship, to empower students with stronger innovation and entrepreneurship abilities.

In this paper, we try to discuss the improvement of entrepreneurship education for college students from the perspective of costudents. The evaluation and feedback of college students’ entrepreneurship education is an important part of the collaborative development of college students’ entrepreneurship education, as shown in Figure 8.

The number of associated events obtained by jointly using the K-means and adjacency matrix simplification methods grows slowly and stays within an acceptable range. Although the running time required at the beginning of the combined simplification method is larger, it stays in the lower range as the number of subellipses increases. In addition, the joint use of the two simplification methods also reduces the number of correlation events, which greatly reduces the computational complexity of the subsequent filtering process and avoids many invalid calculations.

The evaluation of entrepreneurship education for college students can be divided into the internal evaluation of colleges and universities and external evaluation of the effect of entrepreneurship education in colleges and universities, and each subject evaluates four aspects of entrepreneurship education implementation background, resource input, implementation process, and implementation evaluation through the evaluation of the observed indexes, respectively.

The results showed that economic cost had a positive effect on entrepreneurial resilience \( (\beta = 0.263, p < 0.001) \), the \( R^2 \) value increased by 0.068, and the \( F \) value changed significantly, indicating that model 2 has a better explanation of entrepreneurial resilience than model 1. The results of model 3 show that social cost has a positive effect on entrepreneurial resilience \( (\beta = 0.247, p < 0.001) \), \( R^2 \) increased by 0.060, and the \( F \) value changed significantly, indicating that model 3 has a better explanation of entrepreneurial resilience than model 1. The results of model 4 show that psychological cost has a positive effect on entrepreneurial resilience \( (\beta = 0.129, p < 0.05) \), the change in \( R^2 \) is 0.016, and the change in \( F \) value is significant, indicating that model 4 has a better explanation of entrepreneurial resilience than model 1. The above data results show that the path effect of entrepreneurial failure cost on entrepreneurial resilience is significant, that is, entrepreneurial failure cost can promote the formation of entrepreneurial resilience, so Hypothesis 1a, Hypothesis 1b, and Hypothesis 1c are supported. Network education in colleges and universities provides scientific and reasonable countermeasures for mechanism construction, helping the main body of network education in colleges and universities to effectively collect demand, scientific decision-making, resource sharing, collaborative education, and feedback evaluation.

Based on existing theoretical research, this paper proposes a research hypothesis that mindfulness has a moderating effect on the relationship between entrepreneurial failure cost and entrepreneurial resilience. To test the
hypothesis, this paper constructs a regression model to explore the moderating role of mindfulness in the relationship between different types of entrepreneurial failure costs and entrepreneurial resilience. First, this study reverse-scored the reverse questions in the questionnaire, then centralized the interacting variables to reduce nonessential multicollinearity, and finally used the reverse-scored and centralized related variables for analysis.

To express the moderating effect of mindfulness more intuitively between economic cost, psychological cost, social cost, and entrepreneurial resilience, this paper draws moderating effect graphs respectively, that is, at different levels of mindfulness, economic cost, social cost, psychological cost, and entrepreneurial resilience the relationship between resilience. Understand the advantages of the company, and participate in practical learning based on personal expertise and interests. College students exert their subjective initiative in the process of college students' entrepreneurship education, which cannot only obtain greater growth space in the process of entrepreneurship education but also promote a virtuous circle of the collaborative process of college students' entrepreneurship education. Specifically, at high levels of mindfulness (one standard deviation above the mean), economic, social, and psychological costs contribute more to entrepreneurial resilience, while at low levels of mindfulness (one standard deviation below the mean), the positive effects of economic cost, social cost and psychological cost on entrepreneurial resilience are relatively weak.

The internal assessment of colleges and universities refers to the process of self-assessment of entrepreneurship education within the university. The assessment of
entrepreneurship education can be carried out by the career guidance center overall or the academic affairs department within the school, and the criteria for judging each entrepreneurship education assessment observation index can be formulated according to the actual situation of the school, and horizontal comparison with other colleges and universities can be made when analyzing the results of entrepreneurship education assessment, to judge the entrepreneurship education of colleges and universities from a macro perspective.

6. Conclusion

This study takes the mechanism of collaborative innovation in colleges and universities as the research object, explores the realistic needs and basic paths of collaborative innovation construction in colleges and universities, and focuses on analyzing the interest mechanism and realistic problems of collaborative innovation in colleges and universities, and proposes the institutional paths of collaborative innovation in colleges and universities. From the perspective of collaborative students, this paper explores the ways to solve the problems of college students’ entrepreneurship education, and brings into play the synergy of universities, government, society, and college students themselves to promote the development of college students’ entrepreneurship education, enhance the social environment atmosphere and the initiative of awareness of college students’ entrepreneurship education, brings into play the joint efforts of multiple parties to build a collaborative platform for college students’ entrepreneurship education inside and outside universities, builds a college students’ entrepreneurship education based on the CIPP model. Enterprises provide a place for college students to practice, and colleges and universities bring scientific and technological knowledge innovation into enterprises, inject innovative vitality into the development of enterprises, and promote the development of the real economy. The evaluation and feedback system points out the development path of college students’ entrepreneurship education. This paper discusses the development of entrepreneurship education for college students from the perspective of collaborative students.

Data Availability

The data used to support the findings of this study are available from the author upon request.

Conflicts of Interest

The author declares that there are no conflicts of interest or personal relationships that could have appeared to influence the work reported in this paper.

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