

Research on Index Construction and Path Optimization of College Students' Entrepreneurship Ability Based on Analytic Hierarchy Process

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Abstract: Faced with the current situation of college graduates every year in recent years, how to further enhance the entrepreneurial ability of college students by improving their innovative thinking and innovative ability, and then enhance their employment competitiveness, is an urgent problem to be solved. This paper uses the analytic hierarchy process (AHP) to make qualitative and quantitative analysis on the influencing factors of college students' entrepreneurship. It also puts forward the evaluation index system of college students' innovation and entrepreneurship ability, uses the expert correspondence method to determine the importance of each index, uses the scale method to determine the comparison dimension, and uses the analytic hierarchy process to calculate the weight and ranking of each evaluation index. It can fully understand the factors affecting entrepreneurship, avoid entering the misunderstanding of college students, and provide reference for college students to start a business.

1. Introduction

In terms of the role of entrepreneurship education in Colleges and universities to enhance college students' entrepreneurship ability, scholars at home and abroad have reached a consensus that it has become an international common trend to widely carry out entrepreneurship education in Colleges and universities to enhance college students' entrepreneurship ability [1]. In recent years, Chinese governments at all levels have issued a series of preferential policies to encourage and support people to start businesses, mobilize and stimulate the enthusiasm and creativity of the masses of cadres, and promote social harmony through entrepreneurship and employment. However, college students have the disadvantages of insufficient social experience, improper interpersonal relationship management, insufficient leadership ability and insufficient market development ability, which makes the chances of college students' entrepreneurial success very small [2]. However, the shortcomings of China's entrepreneurial education started late, the theory is light practice, and the entrepreneurial system is imperfect, which hinders the process of college students' entrepreneurship. As an educational and scientific research base, colleges and universities are an important source of cultivating innovative and entrepreneurial talents. Strengthening college students' innovation and entrepreneurship education is crucial to comprehensively improving college students' comprehensive quality and innovation and entrepreneurship.

Analytic Hierarchy Process (AHP) is a multi-objective decision analysis method that combines qualitative and quantitative analysis methods. Optimizing and improving the structure of entrepreneurial ability and its training mechanism, improving the pertinence and effectiveness of entrepreneurship education, is conducive to cultivating more entrepreneurial talents [3]. This topic is based on the fundamental purpose of higher education for students to dig and think, in-depth exploration of the core value of University education, new ways and new needs of college students to accept knowledge in the new era. As a comprehensive evaluation method, the analytic hierarchy process (AHP) has been widely used in risk assessment, especially in safety and environmental risk assessment [4]. In the innovation and entrepreneurship education of College students, we should take quality education as the basis, take the cultivation of innovation ability as the key, and explore the practical mode of entrepreneurship as the way to improve the comprehensive quality of College

students.

2. Methodology

In educational practice activities, including any educational activities of innovation and entrepreneurship education, the core objectives are manifested in the level of knowledge acquisition. For innovation and entrepreneurship education, knowledge should be the primary goal in goal setting. Entrepreneurship is a high-risk activity. According to the statistics of China Talent Development Report, the failure rate of general entrepreneurship enterprises is 70%, while the success rate of College Students' entrepreneurship is only 2.5%-3.4% [5]. The essence of innovative thinking is to elevate the perceptual desire of innovative consciousness to rational exploration, to realize the leap from perceptual to rational thinking in innovative activities, which can be summarized as keen market observation, good decision-making judgment, rich imagination and comprehensive planning ability. The system comprehensively considers the factors affecting the innovation and entrepreneurship of economics and management majors, mainly composed of students' innovative thinking, innovative knowledge, innovative entrepreneurial practice ability and non-intellectual factors. By using the quantitative comparison method of pairwise comparison, the relative importance of many influencing factors is analyzed, so that the problem can be solved more directionally.

This paper conducts an evaluation study on the example of innovation and entrepreneurship of a university student. According to a certain factor of the level, relevant experts, leaders and teachers are selected to compare the importance of each evaluation index, and the importance degree is assigned according to 1-5. The results are shown in Table 1 below.

Table 1 Importance scale meaning table

Importance Scale	Meaning
1	Represents the equal importance of two elements
2	The former is slightly more important than the latter.
3	The former is obviously more important than the latter.
4	It means that the former is more important than the latter.
5	It means that the former is more important than the latter.

Through the summary analysis of the results of the pairwise comparison, the following judgment matrix is obtained (see Table 2 below).

Table 2 Innovation and entrepreneurial ability judgment matrix

Innovation and Entrepreneurship ability	Innovative thinking ability	Innovative Knowledge Ability	Innovative entrepreneurial practice	Non-intelligent factor
	1.5	2	1	2
Innovative thinking ability	1	3	1.3	2
Innovative Knowledge Ability	2.3	1	2.4	1.2
Practical Ability of Innovation and Entrepreneurship	2	1.2	2	2.5

College students' innovation and entrepreneurship education is different from the traditional education mode both in educational concept and in educational mode. Society, universities and students should change their ideas. According to the relationship between reachable and unreachable elements, the system is divided into several sub-parts and different levels. After establishing the evaluation system of College Students' innovation and entrepreneurship ability, it will be more helpful to understand college students' innovation and entrepreneurship ability. By successively calculating the hierarchical structure from top to bottom, the relative importance coefficient of the

lowest layer relative to the highest layer (target layer) can be obtained. For students, innovation must first have the ability to innovate, and secondly, innovative thinking, which is the primary influencing factor of innovation and entrepreneurship, and the primary factor that can bring innovation value to enterprises. Of course, innovation consciousness and innovation quality must also be indispensable.

The most important feature of this kind of analysis lies in the in-depth analysis of the nature, influencing factors and intrinsic relationship of complex decision-making problems, using less quantitative information to mathematics the decision-making process, we should focus on cultivating the entrepreneurial competence of college students, improve the moral level of entrepreneurial college students, establish the correct motivation of entrepreneurial society, and cultivate the entrepreneurial ability and characteristics of college students from multiple angles. According to the weight, the consistency of the results is tested. Then according to the structure of analytic hierarchy process, the evaluation index of innovation and entrepreneurship ability is selected. Finally, the evaluation system of three-level target hierarchy structure is further determined. If you want to have the ability of innovation and entrepreneurship, you must have solid basic knowledge, master the skills and methods of innovation skillfully, and need keen market observation and good decision-making judgment. At the same time, you must have the desire and motivation of innovation and entrepreneurship, have the spirit of adventure, and be stubborn and self-confident.

3. Result Analysis and Discussion

In the evaluation of innovation and entrepreneurship ability, the weight of professional knowledge ability is the largest. Therefore, if we want to make higher vocational students better expand and extend their practice and thinking, students must have a relatively substantial knowledge reserve. Only on the basis of solid professional basic knowledge and the application of good innovative methods can we form a strong innovative ability. Of course, self-restraint and management and good pressure resistance are also indispensable in the innovative ability. It is necessary to be able to have a better ability to innovate and start a business through the use of innovative methods on the basis of a more comprehensive level of professional knowledge. Of course, you still need to have enough self-control skills.

The most important in the innovative thinking is the keen market observation ability, followed by the good decision-making judgment, which shows that the ability that must be possessed in the innovative thinking of college students is the keen market observation and judgment decision-making power. Promote the integration of innovation and entrepreneurship education and professional education, and integrate professional education with innovation and entrepreneurship education according to the requirements of college personnel training. Integrating innovation and entrepreneurship education into the whole process of personnel training, realizing dynamic compatibility with professional education, fully mobilizing students' enthusiasm for participation, improving the quality of classroom teaching, and enhancing students' self-confidence. In the sense of innovation, innovation motivation and desire are very important, which directly determines whether the higher vocational students can have the sense of innovation, and whether they can face the dilemma bravely rather than escape.

College students' innovation and entrepreneurship ability can not be improved without innovation and entrepreneurship practice activities. We should make scientific and rational use of different types of e-commerce platforms and professional skills competitions at all levels, and strengthen the support for college students' innovation and entrepreneurship training projects and entrepreneurship competitions. One of the most important innovative qualities is the spirit of daring to innovate and tasting new things. We should be able to do something that others do. For students, first of all, they need to have the ability to innovate, and secondly, they have innovative thinking. This is the leading factor in the innovation and entrepreneurship, and the primary factor that can bring innovation value to the enterprise. For some promising innovation projects and entrepreneurial design, students should be encouraged to incubate through productivity promotion centers or technology incubators, thus truly transforming innovative design and entrepreneurial programs from theory to practice. Let them combine the knowledge and practice they have learned in social practice, understand the needs of

society on the basis of a correct understanding of society, strengthen the education of entrepreneurship concept, and accumulate entrepreneurial experience.

4. Conclusions

The analytic hierarchy process has the characteristics of scientific, practical and accurate and reliable conclusions. It has practical significance for the analysis and evaluation of multi-factors and multiple schemes, and it is a convenient and effective evaluation method. The weight of each indicator is calculated by using the analytic hierarchy process. The design evaluation index system combines qualitative analysis and quantitative analysis, and has strong operability. By applying this model, the shortcomings of the evaluator's personal subjective assumptions can be avoided. And through the expert inquiry method to determine the comparative dimension of indicators, through calculating the weights and ranking of indicators, it has a certain guiding role for how to cultivate the innovation and entrepreneurship ability of College students. For example, when students in higher vocational colleges can be guided to innovate and start businesses, they can not only rely on experience or practice, but also need strong professional knowledge as a reference and guidance to guide and plan their innovative and start-up behavior more reasonably. Therefore, in order to improve the entrepreneurship ability of college students in China, and then enhance the success rate of entrepreneurship, we must start with three basic factors.

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