



Practical Pathways for Cultivating College Students' Employment Competencies in School-Enterprise Collaboration Models

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SUMMARY: The advancement of economic and social conditions has given rise to a contradictory situation: high rates of graduate unemployment alongside challenges in recruitment. Addressing this conundrum hinges on improving the employment capabilities of college students. This study uses University A in City S as a case study to examine the cultivation of employability within the framework of school - enterprise collaboration. The research employs questionnaires and regression analysis. The questionnaires are designed to assess students' employability and understand the influence of school - enterprise cooperation. They also explore the mediating role of collaborative actions. The findings indicate that the average total score for students' employability stands at 3.92. The factors related to employability cultivation account for 8.7% of the overall effect. Collaborative actions have a significant indirect impact. As a result, it is crucial to optimize the talent development mechanism, career guidance services, and the cooperation system to enhance students' employability.

KEYWORDS: *collaboration model between schools and enterprises; college students' employability; regression analysis; mediation effect*

1 Introduction

With the continuous expansion of enrollment in domestic universities, the job - hunting scenario for fresh graduates has grown progressively difficult [1]. For college students, having high - level employability is of great significance as it helps them obtain job openings in a highly competitive job market. Moreover, for universities, it is also essential for their long - term sustainable development [2, 3]. To alleviate the employment difficulties faced by graduates, universities across China have intensified their industry-academia collaborations. By establishing rational and efficient partnership models, they provide numerous practical learning opportunities for recent graduates [4, 5]. The partnership between universities and enterprises acts as a link connecting institutions of higher learning with the corresponding businesses. Through mutual exchange and communication, both parties jointly shoulder the responsibility and obligation of talent cultivation, thereby enhancing students' core employability skills [6].

Cultivating core employability under this model benefits graduates' overall development and career planning [7]. Reference [8] carried out empirical investigations into the mechanisms of cooperation between universities and enterprises, psychological capital, and employability. Surveys administered to participating students, combined with statistical methods like correlation analysis and multilevel regression, demonstrated that such partnerships enhance

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employability. Reference [9] conducted an analysis and investigation of the current situation of student cultivation via collaborations between numerous vocational colleges and related enterprises. The school-enterprise cooperation model refined the curriculum framework for music education, improved students' practical skills and employability, and spurred the growth of teaching teams with dual qualifications. Reference [10] probed into the meaning and component elements of vocational college graduates' employability from the viewpoint of school-enterprise cooperation. It reached the conclusion that such cooperation boosts students' employability through various mechanisms. Reference [11] established and implemented an innovation laboratory based on school-enterprise collaboration. This initiative increased the number of innovation projects, participation rates, and student involvement in intellectual property development, thereby cultivating students' innovation and employment competencies. Reference [12] developed targeted computer market talent cultivation strategies integrated with school-enterprise collaboration models. These strategies enhanced student project engagement, optimized curriculum content, and effectively improved graduates' professional capabilities and core employment competitiveness.

Currently, scholars have initiated scientific and systematic research on the mechanisms through which university-enterprise collaboration enhances college students' employability [13]. To investigate the talent cultivation mechanism of the university-enterprise collaboration model, [14] compared traditional teaching models with the collaboration model. Results showed that the collaboration model increased student employment rates by approximately 11.35% and significantly boosted student enthusiasm for practical teaching. Literature [15] examined the industry-academia collaboration model adopted by Jiangnan University's Automotive Service Engineering program in its "3+1" and "order-based" talent cultivation approaches, demonstrating that this model effectively enhances students' practical abilities and overall competence. In reference [16], the two-factor theory and questionnaire-based investigations were utilized to determine the main motivating elements for boosting students' employability via industry-academia cooperation. These factors are ranked in the following order: hiring employees who meet expectations, developing students' capacity to manage customer influxes, and assisting students in enhancing professional skills that are relevant to both enterprises and society.

The employability cultivation model through industry-academia collaboration emphasizes developing students' social adaptability and positive attitudes required for professional roles, better aligning their social skills development with corporate culture [17-19]. However, challenges persist in employment promotion through industry-academia collaboration: Imbalances in labor market supply and demand drive increasingly stringent employer expectations for graduates, while student rights during internships often remain unprotected. Many institutions evaluate internships solely based on students' written summaries, which not only dampens internship motivation but also hinders improvements in teaching quality and research standards.

In the contemporary job market, which is growing more competitive by the day, the issue of college students' employment is becoming increasingly conspicuous. Graduates encounter challenges in finding employment because of a multitude of complex factors, with a lack of adequate employability being a prominent one. After examining the significance of school-enterprise collaboration, this article details its function in improving students' employability. Using University A in City S as the subject of research, a comprehensive questionnaire was crafted, targeting students, universities, enterprises, and government entities, to evaluate the current state of employability development. By relying on the data from the questionnaire and conducting multiple regression analysis, this article delves into the specific impact of school-enterprise cooperation and suggests practical approaches for cultivating employability.

2 The important role of school-enterprise cooperation in employability development

The growth in the number of students admitted to higher education institutions has heightened the competition among graduates. In order to ease the employment burden, universities are enhancing their cooperation with enterprises. A meticulously crafted cooperation model offers practical chances for students to improve their core employability, thus reducing the employment challenges faced by graduates.

2.1 Definition of relevant concepts

2.1.1 School-Enterprise Cooperation Model

School-enterprise collaboration is a collaborative talent cultivation model established between educational institutions and businesses. By capitalizing on the resources of both parties, it combines in - class theoretical knowledge with real - world enterprise practices to nurture high - caliber professionals. The overarching objective of this model is to foster social progress, and its structure is presented in Figure 1. From the perspective of educational institutions, this form of cooperation enables them to better align with the market. As a result, they can purposefully train students with practical skills. It offers students the opportunity to put theoretical concepts into actual use, which not only strengthens their comprehension of the subject matter but also promotes the sharing of resources. Ultimately, it enhances the quality of technical talent development. At the enterprise level, collaboration between schools and enterprises can leverage the school's profound knowledge reservoir and broad reach to disseminate the enterprise's cultural ethos to a wider audience. This not only amplifies the enterprise's influence but also offers an opportunity for the enterprise's technical staff to receive instruction and enhance their skills, thereby facilitating the enterprise's better growth and development. On the social level, school - enterprise cooperation nurtures students with enhanced practical skills. This leads to an increase in the employment rate of college students and boosts their social acceptance. Moreover, it plays a significant role in promoting the long - term development of both the school and society [20].

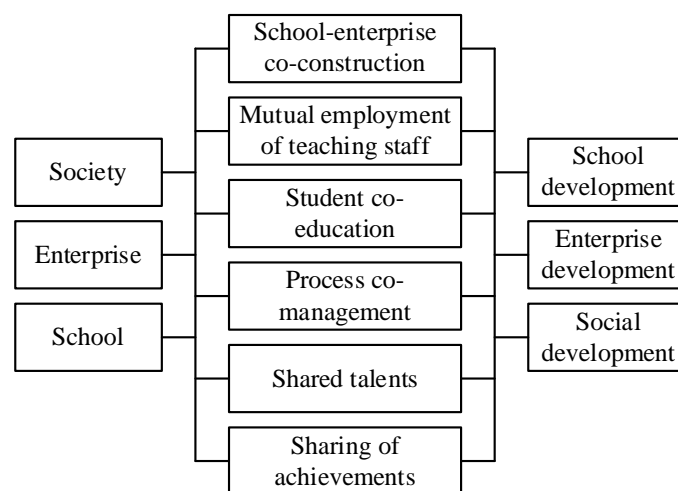


Figure 1: Hierarchical framework for school-enterprise cooperation

In a broad sense, the school-enterprise collaboration model involves cooperation between educational institutions and businesses that extends beyond talent cultivation. It encompasses

areas such as technological advancement, advisory services, and staff training. On the other hand, in a narrow sense, the school-enterprise collaboration model is a method of nurturing highly skilled professionals required for social and economic progress. Guided by social development and business needs, this approach capitalizes on the respective resource data and environmental benefits of schools and enterprises. It effectively combines the theoretical knowledge imparted in classrooms with the practical skills honed in industrial settings.

2.1.2 Employability of university students

Employability encompasses the array of proficiencies, knowledge, and characteristics that individuals must possess to enter the labor market, retain employment, and thrive in their professional lives. These include technical competencies, communication capabilities, teamwork proficiencies, problem - solving aptitudes, as well as adaptability and learning capacities. Figure 2 presents the theoretical framework of USEM, which is based on the work of Manz Yorke and Pieter Knight. In detail, technical competencies involve the specialized knowledge and skills necessary for a specific occupation or industry. Communication capabilities cover effective oral, written, and non - verbal communication. Teamwork proficiencies highlight the capacity to cooperate with others to reach a shared objective. Problem - solving aptitudes pertain to the ability to recognize problems and discover efficient solutions. Meanwhile, adaptability and learning skills are linked to continuous advancement and growth in a dynamic work environment [21].

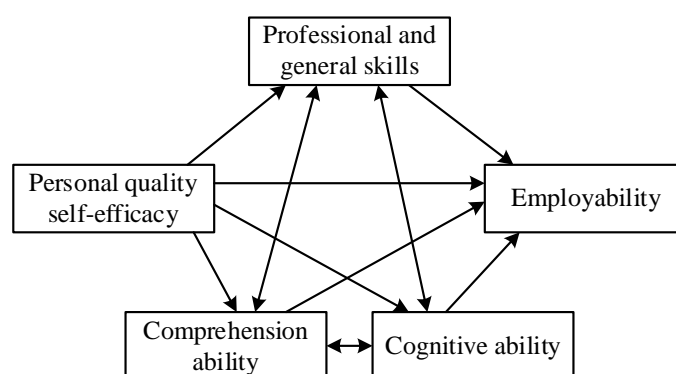


Figure 2: Employment capacity composition chart

The employability of university students is grounded in the aforementioned framework. This framework primarily encompasses professional competence, professional mindset, work practices, innovative capabilities, adaptability to corporate culture, and teamwork skills, among others. The improvement of university students' employability is closely linked to the effective guidance from educational institutions. The advent of the school - enterprise cooperation model has presented a novel approach for enhancing the employability of university students. This model more effectively guarantees the precision of university students' job - seeking endeavors.

2.2 Importance of the school-enterprise cooperation model

2.2.1 The necessity of school-enterprise cooperation

Cooperation between schools and enterprises represents an efficient approach to talent cultivation, yielding mutually beneficial outcomes for educational institutions, businesses, and students. It serves as a crucial solution to the challenges faced by enterprises in recruiting skilled workers and the need for reform in higher education's talent development strategies in the contemporary era. Universities and colleges adopt a collaborative model with enterprises to

offer students a targeted training program. This initiative integrates theoretical knowledge with practical skills, aiming to meet the requirements of the professional environment.

(1) Fulfill the role of colleges and universities. Only when colleges and universities cooperate with enterprises can they accurately understand the talent requirements of enterprises at the forefront. Subsequently, they can achieve the alignment between talent training and enterprise demands. Simultaneously, by making full use of enterprise resources, they can better cultivate high - quality applied talents who are truly needed by enterprises and possess the practical job - related capabilities that meet the requirements. In this way, the function of personnel training in universities can be realized.

(2) Moreover, it contributes to the development of enterprises. Effective collaboration between universities and businesses allows companies to quickly convey their talent requirements, thus resolving the misalignment between university education and enterprise needs. Students who are trained as "prospective employees" can achieve a smooth transition. This assists enterprises in recruiting appropriate talents, shortening the adjustment period, reducing training expenses, and lowering staff turnover rates.

(3) Enhance students' ability. Through the deep cooperation between schools and enterprises to build an effective teaching mode, based on the market-oriented, can cultivate students with good vocational ability. At the same time, students can eliminate job unfamiliarity and accelerate students' adaptation to jobs by getting actual job experience, so that students have more employment options.

2.2.2 Promoting role of the school-enterprise cooperation model

Collaboration between schools and enterprises is to integrate the requirements and factors of enterprises into the whole process of teaching through the cooperation between the two main bodies, namely, school-enterprise collaboration involves the cooperation between educational institutions and businesses. It represents the educational objective set by universities based on the particular requirements of the market and enterprises for skilled individuals. Both parties collaboratively design the teaching curriculum and instructional schedule, integrating classroom instruction with corporate training. This form of cooperation plays a crucial role in facilitating the employment of university graduates, and its positive impacts are manifested in the following areas:

(1) School-enterprise cooperation helps to strengthen graduates' employment cognition, establish employment orientation and improve employment rate. Via corporate lectures, internships, and practical training facilities established through school - enterprise collaboration, students are able to gain insights into the job market and market trends. They can also immerse themselves in the work environment, discover their own career preferences, and formulate plans for their professional development.

(2) Collaboration between schools and enterprises contributes to enhancing the employment capabilities and overall quality of graduates. Via the hands - on prospects offered by the collaboration between schools and enterprises, and under the guidance and assistance of "dual - educator" faculty members, it is easier for students to stimulate their own interest in learning, explore and think about the problems arising from practice, master professional and technical skills, and improve their own hands-on ability and innovation ability. Collaboration between schools and enterprises can strengthen students' expertise in their fields of study and practical capabilities. It can also foster students' hands - on skills and creative thinking, as well as elevate their job - seeking ability and overall competence [22].

3 Analysis of the current situation and survey on the development of employability of university students

In the face of an economic downturn, mounting employment stress, and structural disparities, it is of utmost importance to enhance the employability of college students to increase both the quantity and quality of employment. This not only aligns with the requirements of social development but also promotes the long - term viability of individual careers. As a result, elevating employability necessitates the collaborative efforts of individuals, governments, universities, and employers.

3.1 Study population and questionnaire design

3.1.1 Selection of research subjects

Situated in City S, University A is an applied undergraduate institution founded by the municipal government and overseen by the municipal education commission. It is recognized as a national high - quality university and stands among the local top - tier establishments. For five consecutive years, it has been placed in the first rank among the city's application - focused universities. The university boasts a faculty of more than 750 individuals. Among them, 620 are full - time educators. There are 45 full professors, and those with senior professional titles make up 30.47% of the total faculty. A total of 115 faculty members hold a Doctor of Philosophy degree, and 86.24% of the teachers have a master's degree or higher. Moreover, 78.45% of the full - time teachers are dual - qualified, meaning they possess both academic knowledge and practical industry experience. The number of part - time teachers from enterprises remains relatively stable, accounting for approximately 50% of the teaching staff.

The university, which has a student body of over 10,000, provides more than 30 academic majors. In the past three years, it has achieved an employment rate of over 96% and a contract - signing rate of over 85%. Renowned for its exceptional innovation and entrepreneurship education, it has secured gold medals at the national "Internet +" Competition for three successive years, setting a precedent for local undergraduate institutions. However, given the current state of the global economy, which is experiencing a slowdown, and the various challenges stemming from policies, geographical factors, industrial conditions, and costs, the employment situation in China is rather severe. With these external changes, the pressure on graduates to find jobs keeps intensifying each year. The issue of graduates facing challenges in finding employment has become increasingly pronounced. University A in City S is also experiencing significant pressure in this regard. This paper selects this university as the subject of research. Its objective is to investigate the alterations and influencing factors of college students' employability within the school - enterprise cooperation model. Moreover, it aims to offer support for refining the strategy of cultivating college students' employability under the school - enterprise cooperation model.

3.1.2 Questionnaire design

The primary objective of this survey is to gain an in - depth understanding of the present state of college students' employability at School A in S City. Through interviews and research, we aim to view this issue from the standpoints of enterprises, graduates, and teachers within the institution. This process will help us identify the existing problems in the cultivation of students' employability. Subsequently, we will conduct an analysis of these problems to formulate practical countermeasures. These countermeasures can then be used as a reference for enhancing the students' employability in the future.

The questionnaire was constructed based on the main subjects (students, schools, enterprises, and government) from the components of college students' employability by drawing on the existing relevant studies, and its specific content is shown in Table 1. In addition, it also investigates and researches the status quo of school-enterprise cooperation, the problems encountered in the cultivation of employability in the teaching process, and the career development situation. As for the elements of college students' entrepreneurial ability cultivation, this paper mainly investigates six dimensions from establishing school-enterprise industry-teaching cooperation institutions, carrying out school-enterprise entrepreneurship exchange activities, implementing enterprise entrepreneurship mentor guidance system, perfecting enterprise internship mechanism, providing entrepreneurs with entrepreneurial funding, and creating school-enterprise entrepreneurship practice platform, which are recorded as CY1~CY6. This can offer data assistance for the subsequent analysis within this paper regarding the relationship between the school - enterprise cooperation model and the effectiveness of cultivating college students' entrepreneurial capabilities. It can also supply data support for the later - stage analysis of the correlation between the school - enterprise cooperation approach and the development of college students' entrepreneurial skills.

Table 1: Questionnaire on College Students' Employment Ability

Main	Factor	Code
Student	Academic participation	S1
	Club participation	S2
	Practical participation	S3
	Employment mentality	S4
University	Curriculum design	U1
	Teaching methods	U2
	Teaching staff level	U3
	Employment guidance	U4
Enterprise	School-enterprise cooperation	E1
	Employment opportunities	E2
	Employment environment	E3
Government	Cultivation and support	G1
	Employment services	G2
	Employment policy	G3

The survey was carried out via the Questionnaire Star platform. From September to December 2024, a total of 1,000 surveys were disseminated. After eliminating duplicate and invalid surveys, 947 surveys were successfully collected. Subsequently, the collected survey data were sorted out to offer support for the later quantitative data analysis.

3.2 Analysis of the current situation of employability training

3.2.1 Results of the survey on the employability of university students

To accurately assess the proficiency of diverse employability competencies among college students within the school-enterprise collaboration framework, this research relies on a questionnaire and employs a five-tier evaluation approach to conduct the survey. Each ability element is divided into five levels, the larger the branch represents the higher the ability, i.e., 1 represents very poor, no performance of the behavioral ability, and from time to time contrary to the described behavior. 2 represents poor, understand the behavioral ability, and occasionally

perform the behavioral ability. 3 represents average, in general, can often perform the behavioral ability. 4 represents good, even in very complex situations, can perform the behavioral ability. 5 represents excellent, whenever the ability performance exceeds the expectations, and can be considered as a good performance. An outstanding score of 5 indicates a remarkable performance that consistently surpasses expectations. When integrated with the data obtained from the questionnaire, the findings of the survey regarding the employability of college students within the university-enterprise cooperation model are presented in Figure 3.

Based on the data in the figure, it is found by analyzing each sub-competency item vertically that the subject is the enterprise with the lowest score, and the mean value of the overall dimension is 3.37 points, which are all lower than the cumulative mean value (3.92 points). The employability of college students is intricately connected to enterprises. Through school-enterprise collaboration, both parties work together to enhance students' abilities, enabling them to acquire the knowledge that enterprises demand. Nevertheless, enterprises are not fully fulfilling their roles, which is impeding the improvement of students' employability. In terms of the student dimension, it has the highest score of 4.19, which is 6.89% higher than the overall average. Within the framework of school-enterprise collaboration, students construct professional knowledge frameworks that satisfy both educational requirements and the needs of enterprises. Leveraging information technology and policy instruments, they gain a deeper comprehension of the industry and specific job positions, identify their employment aspirations, and formulate career plans, thus boosting their employability. The university has an average score of 4.11, which attests to its worth. As the primary place of learning, universities offer employment counseling to assist students in understanding relevant policies, enhancing their overall proficiency, professional competencies, and career planning abilities.

After a comprehensive examination of the survey's overall findings, it has been determined that the employability of college students at School A is at an average level (3.92 points; a range of 3 to 4 points is considered average). When considering the analysis of the sub - elements of college students' employability, it becomes clear that fostering the employability of college students within the school - enterprise cooperation model necessitates the collaborative efforts of four key entities: students, educational institutions, businesses, and the government. Among these, businesses, as a key entity, need to increase their investment. By doing so, they can guarantee an improvement in the employability of college students. Moreover, this increased investment will enable enterprises to acquire more suitable talents to support their own development.

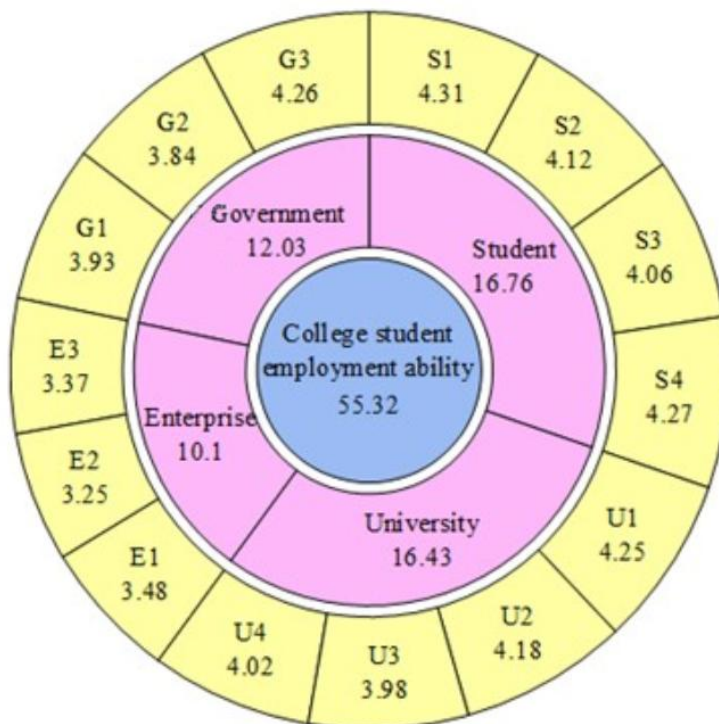


Figure 3: The survey results on the employability of college students

3.2.2 Impact of school-enterprise cooperation on employability

To determine the specific impact of the school-enterprise cooperation model on the employability of college students, it is essential to examine the most crucial elements for enhancing employment competitiveness. Based on this, the questionnaire in this paper is set as “What is the most important factor affecting employment competitiveness”, which mainly includes five items: theoretical knowledge (F1), professional skills (F2), practical ability (F3), interpersonal communication (F4) and language expression (F5). And the survey population is divided into three categories: related majors, similar majors and unrelated majors, and the statistical questionnaire data get the biggest factors affecting employment competitiveness as shown in Figure 4.

As is evident from the figure, the selection of the most significant factors influencing employment competitiveness differs among various majors. The more similar to the school's special majors, owing to the robustness of school - enterprise collaboration and instances of vocational education, students are of the view that the likelihood of direct engagement in work is higher. As a result, they place greater emphasis on professional competencies and practical capabilities. For students who are not in the school's advantageous specialties, due to the disadvantage of employment, more attention is paid to the cultivation of personal soft power, such as interpersonal communication and language expression, on the basis of ensuring theoretical knowledge, professional skills and practical ability.

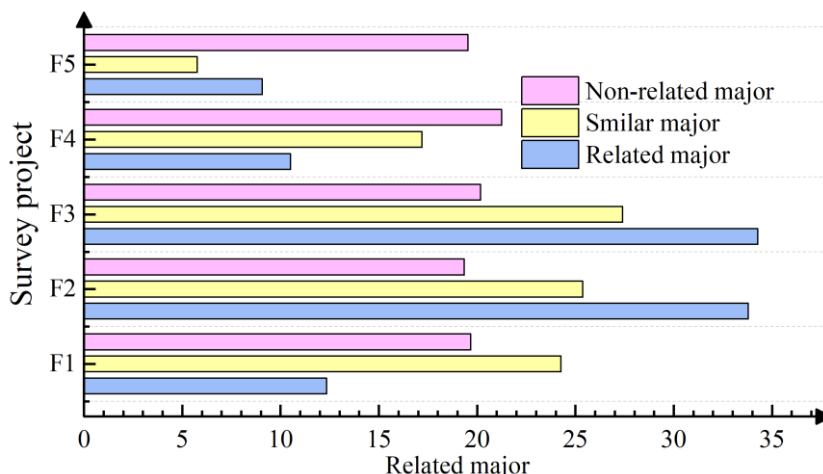


Figure 4: The biggest factor influencing employment competitiveness

School-enterprise cooperation impacts students' employment most directly by influencing their employability. To some degree, a student's employability plays a crucial role in determining their employment prospects. Considering the job - related skills that college students might need in real - world work, a question was formulated: “Which employment skills do you believe school - enterprise cooperation can enhance for you?” The question mainly contains seven options, which are labeled as Y1~Y7, including career planning, practical ability, sense of responsibility, sense of cooperation, professionalism, innovation ability, and problem solving, etc. The outcomes of the survey, depicted in Figure 5, indicate that a staggering 87.33% of students place the highest value on practical skills. This finding is in perfect harmony with the central objective of school - enterprise collaboration. Occupying the second position is career planning, with a percentage of 63.67%. The reason behind this is that such cooperation enables students to bridge the gap between theoretical knowledge from textbooks and actual work scenarios, thereby helping them to clearly define their career aspirations. Other aspects have comparable yet significantly lower proportions. Among them, responsibility and innovation register the lowest figures, at 22.81% and 20.59% respectively. This situation implies that universities should not only focus on professional skills training but also strengthen the cultivation of personal qualities.

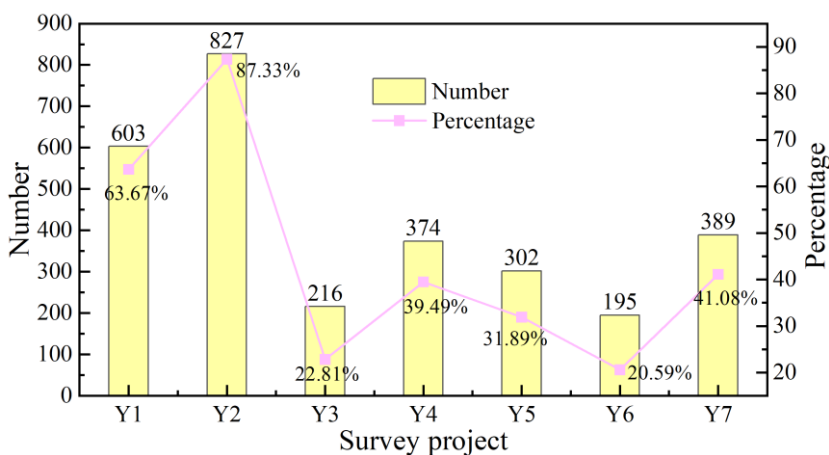


Figure 5: The impact of school-enterprise cooperation on employability

4 Empirical evidence of the cultivation of college students' employability and the path to enhance it

Currently, a crucial issue that both universities and society need to focus on is how to achieve a more efficient alignment between the training models of higher education institutions and market requirements, nurture high-caliber talents, and boost the employability of college students. All universities are actively engaged in exploration to find effective solutions. Among these, collaboration between schools and enterprises is considered an effective approach to enhancing the employability of college students. Guided by the market, proactively implementing the school-enterprise cooperation model featuring professional distinctiveness and diversifying the school-enterprise cooperation channels in various aspects can achieve the talent cultivation objective. This approach is beneficial for fulfilling the requirements of social development, supplying enterprises with suitable talents, boosting the employment competitiveness and career advancement of college students, and effectively resolving the issue of college graduates' employment difficulties.

4.1 Empirical research on the cultivation of university students' employability

4.1.1 Fostering elemental relevance

Drawing upon the data gathered from the questionnaire, to conduct a more in - depth analysis of the impact of fostering college students' employability (JY), this paper conducts a correlation analysis centered around the key cultivation factors (CY1~CY6), such as establishing school-enterprise industry-teaching cooperation institutions, carrying out school-enterprise entrepreneurship exchange activities, implementing the enterprise entrepreneurship mentor guidance system, improving the enterprise internship mechanism, providing entrepreneurial funding for startups, and creating a school-enterprise entrepreneurship practice platform. Analyze. The results of correlation analysis between each training element and college students' employability are shown in Table 2. In the table, *, **, *** denote the correlation at the levels of 10%, 5% and 1%, respectively, and the same as in the following.

Based on the data presented in the table, it is evident that the correlation coefficients of crucial cultivation factors, including the establishment of school - enterprise industry - teaching cooperation organizations and the implementation of school - enterprise entrepreneurship exchange events, implementing enterprise entrepreneurship mentor guidance system, perfecting enterprise internship mechanism, providing entrepreneurial start-up funding support for entrepreneurs, and creating a school-enterprise entrepreneurship practice platform, and the college students' employability are 0.183, 0.274, 0.252, 0.227, 0.218, respectively, 0.191, and all of them show extremely significant correlation at 1% level. Moreover, all the cultivation elements exhibit positive correlation coefficients with the employment capabilities of college students. This suggests that each cultivation element has a positive facilitating impact on the employment capabilities of college students. Specifically, the correlation coefficients between two cultivation factors - namely, the conduct of school - enterprise entrepreneurship exchange activities (CY2) and the implementation of the enterprise entrepreneurship mentor guidance system (CY3) - and the employability of college students are all above 0.25. This finding implies that within the school - enterprise cooperation model, it is essential to strengthen the exchange activities between schools and enterprises. Additionally, it is necessary to invite enterprise mentors to schools to offer employment guidance and services to students. By doing so, it can be better ensured that the employability of college students can meet the talent

requirements of enterprises.

Table 2: The correlation analysis results of the culture elements

Variable	JY	CY1	CY2	CY3	CY4	CY5	CY6
JY	1.000	0.183***	0.274***	0.252***	0.227***	0.218***	0.191***
CY1	0.183***	1.000	0.143**	0.207**	0.232*	0.185**	0.174***
CY2	0.274***	0.143**	1.000	0.272***	0.294*	0.258**	0.205**
CY3	0.252***	0.207**	0.272***	1.000	0.207**	0.185*	0.173***
CY4	0.227***	0.232*	0.294*	0.207**	1.000	0.236**	0.195***
CY5	0.218***	0.185**	0.258**	0.185*	0.236**	1.000	0.117**
CY6	0.191***	0.174***	0.205**	0.173***	0.195***	0.117**	1.000

4.1.2 Multiple regression analysis

The analysis of correlations indicates that there is a notable association between the employability of college students and the cultivation components of the school-enterprise cooperation model. To further clarify the nature of the relationship between the two and determine if there is a cause-and-effect relationship, this paper will utilize the approach of regression analysis for verification.

To conduct a more in - depth exploration of how the school - enterprise cooperation model impacts the cultivation outcome of college students' employability, after performing a correlation analysis, we first utilize one - dimensional regression analysis. This involves conducting a one - dimensional linear regression separately on the cultivation outcome of college students' employability and each cultivation element within the school - enterprise cooperation model. The aim is to gauge the degree to which the school - enterprise cooperation model affects the cultivation of college students' employability. Subsequently, we employ multiple regression analysis. This analysis is used to assess the impact of each cultivation element in the school - enterprise cooperation model on the cultivation outcome of college students' employability. It helps to pinpoint the key influencing factors and further verify the strength of the influence between these elements. The findings of this research are presented in Table 3.

The data presented in the upper section of the table indicate a linear and notable correlation between the cultivation factors of the school - enterprise cooperation model and the effectiveness of cultivating college students' employability. This relationship is well - suited for the establishment of a single - variable linear regression equation. The single - variable linear equation that can be formulated is $y = 25.127 + 0.024x$. This equation implies that each cultivation factor of the school - enterprise cooperation model exerts a certain level of influence on the cultivation effectiveness of college students' employability and has a predictive function. Moreover, each cultivation factor of the school - enterprise cooperation model can account for 1.7% of the cultivation effectiveness of college students' employability. Subsequently, we conduct a multiple step - by - step regression analysis. In this analysis, we set the effectiveness of college students' employability training as the dependent variable and the cultivation factors of the school - enterprise cooperation model as the independent variables. The formation of industry - teaching cooperation organizations between universities and enterprises, the conduct of entrepreneurship exchange activities between universities and enterprises, the execution of the enterprise entrepreneurship mentor guidance system, the enhancement of the enterprise internship mechanism, the provision of startup funds for entrepreneurs, and the creation of a university - enterprise entrepreneurship practice platform are incorporated into the regression equation. That is to say, there exists a multivariate linear relationship with the outcome of cultivating college students' employability. The multiple linear regression equation is $y = 31.846 + 1.427 \times \text{CY1} + 2.343 \times \text{CY2} + 2.236 \times \text{CY3} + 2.051 \times \text{CY4} + 2.069 \times \text{CY5} + 1.218 \times \text{CY6}$.

Collectively, these factors account for 8.7% of the impact on the cultivation of college students' employability. This shows that each cultivation element within the school - enterprise cooperation model has a predictive effect on the outcome of cultivating college students' employability and serves as a crucial influencing factor.

Table 3: Multivariate linear regression analysis results

Regression analysis							
Variable	B	β	<i>t</i>	<i>P</i>	R	<i>R</i> ²	<i>F</i>
(Con_)	25.127		38.514	0.001			
JY	0.024	0.054	2.576	0.013	0.084	0.017	7.652*
Multivariate regression analysis							
Variable	B	β	<i>t</i>	<i>P</i>	R	<i>R</i> ²	<i>F</i>
(Con_)	31.846		62.651	0.000	0.293	0.087	43.249 ***
CY1	1.427	0.154	4.338	0.005			
CY2	2.343	0.086	6.794	0.000			
CY3	2.236	0.047	6.582	0.000			
CY4	2.051	0.053	2.765	0.023			
CY5	2.069	0.032	2.413	0.001			
CY6	1.218	0.075	3.257	0.000			

4.1.3 Analysis of intermediation effects

Following an analysis of the crucial factors influencing the cultivation of college students' employability within the school-enterprise cooperation framework, this paper further designates college students' gender, grade, major category, and internship background as control variables. It selects the school-enterprise cooperation model (CY) as the independent variable, the behavior of the entity in the school-enterprise collaboration (ZTXW) as the mediating variable, and college students' employability as the dependent variable. Subsequently, it employs SPSS software to conduct a mediation effect analysis. The results of this mediation effect test are presented in Table 4.

Model (2) demonstrates that school - enterprise collaboration has a notable influence on the cultivation of employability, with a coefficient of 0.724 (***). Model (4) shows that it has a significant impact on the actions of cooperative parties, with a coefficient of 0.631 (***). Model (5) uncovers that these actions significantly affect the cultivation of employability. When considering these actions, the coefficient of school - enterprise collaboration decreases from 0.724 to 0.538, yet it still remains significant at the 1% level. This validates the partial mediating function of the actions of cooperative parties.

Table 4: The test results of the mediating effect

Variable	JY		ZTXW		JY
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Sex	0.063	0.012	0.065	0.006	0.008
Grade	-0.057	-0.088**	0.008	-0.001	-0.084**
Major type	0.162***	0.065*	0.175***	0.078	0.046
Internship experience	-0.127**	-0.131***	-0.001	-0.002	-0.127***
CY	-	0.724***	-	0.631***	0.538***
ZTXW	-	-	-	-	0.312***
<i>R</i> ²	0.069	0.583	0.043	0.457	0.643
Adj. <i>R</i> ²	0.069	0.512	0.043	0.415	0.527
<i>F</i>	9.248***	93.154***	5.276***	83.172***	103.261***

Further taking gender, grade, major type, internship experience as control variables, selecting school-enterprise entrepreneurship exchange activities (CY2), enterprise entrepreneurship mentor guidance system (CY3), and school-enterprise entrepreneurship practice platform (CY6) under the mode of school-enterprise cooperation as independent variables, the behavior of the main body of school-enterprise cooperation (ZTXW) as a mediator variable, and the college student's employability as a (JY) as a dependent variable, using the PROCESS's model select Bootstrap Samples=1000 times to carry out the mediation test, and get the mediation effect analysis results as shown in Table 5. In the table, LLCI and ULCI represent the lower and upper limits of the confidence interval, respectively.

Based on the data, the overall impact of school - enterprise entrepreneurship exchange activities (CY2) on employability amounts to 0.142 (the confidence interval does not contain 0), which verifies its presence. The direct influence is 0.091 (the confidence interval includes 0), suggesting that there is no direct effect. The indirect impact (CY2 - ZTXW - JY) stands at 0.051 (the confidence interval does not contain 0), demonstrating its existence. The corporate entrepreneurship guidance system (CY3) has an overall effect of 0.195 (the confidence interval does not contain 0), confirming the overall effect. The corporate entrepreneurship guidance system (CY3) does not have a direct impact (0.133, confidence interval encompasses 0), yet it exhibits a notable indirect impact of 0.062 (confidence interval does not include 0). The school - enterprise entrepreneurship practical platform (CY6) has an overall effect of 0.217 (confidence interval does not include 0). It has no direct effect (0.168, confidence interval includes 0), but there is a significant indirect effect of 0.049 (confidence interval does not include 0).

In conclusion, it is evident that the actions of school and enterprise entities within the school-enterprise cooperation framework have an impact on the cultivation of college students' employment capabilities to a certain degree. Therefore, it is possible to make further improvements to the communication activities, enterprise mentor guidance, and entrepreneurial practice platform during the cooperation between colleges and universities and enterprises. This will contribute to enhancing the employment abilities of college students and laying the groundwork for supplying a greater number of high-quality talents to society.

Table 5: Analysis results of mediation effect

	Effect value	SE	T	P	LLCI	ULCI
Total Effect						
CY2-JY	0.142	0.032	4.453	0.000	0.075	0.195
CY3-JY	0.195	0.035	5.127	0.001	0.124	0.264
CY6-JY	0.217	0.034	6.659	0.003	0.158	0.286
Direct Effect						
CY2-JY	0.091	0.031	2.834	0.002	-0.029	0.145
CY3-JY	0.133	0.035	3.492	0.003	-0.063	0.198
CY6-JY	0.168	0.032	5.136	0.001	-0.104	0.231
Indirect Effect						
CY2-ZTXW-JY	0.051	0.016			0.028	0.087
CY3-ZTXW-JY	0.062	0.018			0.034	0.094
CY6-ZTXW-JY	0.049	0.014			0.031	0.085

4.2 Paths for improving the employability of university students

4.2.1 Optimizing talent development mechanisms

Refining the talent development framework is crucial for boosting the employment prospects of university graduates. Educational institutions should revamp their course offerings by augmenting hands - on and application - centered courses while scaling back on theoretical and knowledge - heavy ones. The emphasis should be on nurturing students' practical skills and their capacity to address real - world issues. To achieve this, universities and colleges need to take action in the following areas:

To begin with, make adjustments to the curriculum. Incorporate more hands - on, application - centered courses, like project administration and data scrutiny. These courses are centered around fostering students' practical skills and their capacity to tackle real - world problems. Moreover, they aim to develop students' professional expertise and overall capabilities, which will assist students in better meeting the requirements of the job market.

Secondly, fortify skills instruction. Professional skills training programs are presented to offer students chances to acquire the essential competencies for the industry and boost their edge in the employment market. Establish vocational skills training facilities to give students the possibility for hands - on operation. By replicating actual work settings, students can amass practical operating know - how and improve their professional proficiency.

Third, set up dual degrees and minors. Encourage students to pursue dual degrees or minors to broaden their knowledge and enhance their career competitiveness. Take, for instance, undergraduates specializing in computer science. They have the option to pursue a minor in business administration. By doing so, they can obtain business acumen and managerial proficiencies. Or they can cooperate with enterprises to offer customized majors to train talents urgently needed by enterprises. Colleges and universities can offer relevant minors on the basis of understanding the needs of the industry.

By optimizing the talent cultivation mechanism, colleges and universities can cultivate students with solid professional knowledge, proficient vocational skills and strong professionalism, improve their employability and enhance their competitive advantages.

4.2.2 Sound employment guidance service system

The employability of graduates is fundamental to high - quality employment. Universities ought to improve their employment guidance services and offer comprehensive support throughout the students' journey from enrollment to job placement to boost students' career development and decision - making abilities. To begin with, universities should introduce courses on career planning and employment guidance. These courses can assist students in gaining a deeper understanding of themselves and their chosen fields of study. By doing so, students can clearly define their career aspirations and formulate practical action plans. Secondly, it is essential to conduct specialized training according to the requirements of employers. Universities should increase the proportion of practical teaching and ensure that the training programs are in line with the needs of enterprise positions. Additionally, by integrating various resources, universities can establish internship bases and industry - university - research platforms. This integration helps to create a seamless transition from internships to full - time employment. Lastly, universities should organize a wide range of employment - related activities and offer customized guidance to students. This approach can better meet the individual needs of students and enhance their employability. Comprehensively survey students' employment intentions, do a good job of interpreting employment policies, and accurately push employment information for students on a point-to-point basis. Through the opening of interview simulation, job search etiquette courses, resume diagnosis, job search skills

competition and other activities, to guide students to get ready for employment, enhance confidence in employment, improve employability.

4.2.3 Deepening school-enterprise cooperation mechanisms

Proactively investigate the long - term model of school - enterprise collaboration, intensify the reform of teaching content, and establish a cooperative cultivation mechanism to enhance the employability of graduates. Currently, the cooperation between local engineering colleges and enterprises is mostly short - term in nature. Hence, it is necessary to explore the long - term model of school - enterprise cooperation. Concretely, this long - term model encompasses the benefit - sharing mechanism, incentive mechanism, supervision mechanism, reward and punishment mechanism, risk management mechanism, and quality assurance mechanism of school - enterprise cooperation. By perfecting the long - term mechanism of school - enterprise cooperation, we can drive the school - enterprise cooperation to develop to a more profound level.

Universities ought to promote teaching innovation throughout the entire talent development process to improve students' employability. To begin with, educational outlooks should be modernized to nurture interdisciplinary professionals and elevate the overall proficiency of engineering students. Next, collaborative employment strategies should be explored. This can be achieved by forging agreements with businesses to establish specific employment pathways for graduates. In addition, curriculum and teaching approaches need to be reformed. The development of employability should be integrated into teaching, and course materials should be tailored to meet industry requirements to enhance students' professional competence. Finally, students' awareness of employment should be heightened. They should be motivated to engage in early career planning and be guided to improve their vocational skills and comprehensive capabilities.

Colleges and universities ought to proactively investigate the collaborative education mechanism. This is not only to boost employability across the entire teaching and learning process but also to build a school - enterprise cooperation "overpass" for talent cultivation through the involvement of enterprises in collaborative education. By leveraging information technology, relevant issues can be gathered and feedback can be obtained. Subsequently, talent training programs can be adjusted promptly to nurture more interdisciplinary talents that meet societal requirements.

5 Conclusion

This paper selects University A in S City as the research subject to investigate the current situation and influencing factors of employability development under the school - enterprise cooperation model. The findings indicate that the average score of students' overall employability is 3.92, suggesting a moderate level. This score is significantly associated with the actions of students, universities, enterprises, and the government. A multiple regression analysis demonstrates that the cultivation elements account for 8.7% of the impact. The behavior of cooperative entities has a notable mediating effect. Consequently, it is crucial for universities and enterprises to collaborate. By optimizing the training system, enhancing career guidance, and strengthening cooperation, it will be possible to cultivate talents that meet the requirements of enterprises.

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