Proceedings of International Conference on Islamic Education (ICIED)
Impactful Education: Integrating Technology, and Ecotheological Values For a Sustainable Future
Volume 10, 2025 (p-ISSN 2477-3638 / e-ISSN 2613-9804)

The impact of school enterprise cooperation and vocational skills training on the employment competitiveness of vocational collage students in Yunnan Province

Aiqi Wang[1], Surachai Traiwannakij[2]

Correspondence:
surachai.t@mail.rmutk.ac.th

Affiliation:
Department of Management Science, Institute of Science Innovation and Culture Rajamangala University of Technology Krungthep, Bangkok, Thailand[1,2]
surachai.t@mail.rmutk.ac.th

Abstract
This article combines literature review and questionnaire survey methods to systematically examine the theoretical framework and development status of school-enterprise cooperation and vocational skills training. Research has shown that school enterprise cooperation can promote the integration of educational resources and market demand, provide more internship opportunities, enhance students' professional ethics and practical abilities, and thus improve their employment competitiveness. Enterprise participation enables vocational colleges to promptly understand industry development trends, adjust course offerings, optimize teaching content, and better meet enterprise talent needs. As an essential component of vocational education, vocational skills training offers targeted courses and practical training programs to help students master skills that meet industry standards and enhance their adaptability to the job market. Finally, this article concludes that school-enterprise cooperation and vocational skills training are essential means to improve the employment competitiveness of vocational college students. By deepening school enterprise cooperation and strengthening vocational skills training, students' vocational abilities and comprehensive qualities can be effectively improved, helping them better adapt to the rapidly changing job market. Vocational colleges should fully leverage their core role in talent cultivation, closely collaborate with enterprises, and jointly promote the development of high-quality vocational education.

Keywords:
School Enterprise Cooperation; Vocational Skills Training; Employment Competitiveness; Vocational Colleges, Talent Cultivation

A. INTRODUCTION

The sustained development of the Chinese economy, coupled with profound structural transformations in society and industry, has amplified the strategic importance of vocational education as a primary conduit for cultivating a skilled technical workforce. While vocational colleges are instrumental in this mission, their graduates face increasingly challenging employment prospects. These challenges are precipitated by rapid industrial upgrading, accelerated technological change, and volatile market demands, which expose a critical disconnect between traditional educational paradigms and the evolving needs of the modern workplace (Zhu, 2024). This misalignment, characterized by outdated pedagogical models and a lag in responsive employment services, significantly undermines the employment competitiveness of vocational college graduates, making this a pressing concern for educational institutions and policymakers alike.

The cultivation of technical talent requires a strong symbiosis with the job market, requiring not only a solid theoretical foundation but also robust practical skills and job adaptability. However, the dynamic nature of industry requirements often outpaces the adaptive capacity of vocational curricula, creating a significant gap between the skills imparted and those employers demand (Yi, 2024). In response, school-enterprise cooperation and vocational skills training have emerged as pivotal interventions. The former facilitates a dynamic alignment of educational programs with industry trends through institutional collaboration, while the latter directly enhances students' practical competencies and workplace readiness. These strategies are strongly supported by national policy frameworks, such as the "National Medium- and Long-Term Education Reform and Development Plan Outline (2020-2024)," which mandates deeper integration between academia and industry.

Empirical evidence underscores the efficacy of these approaches. According to the "China Higher Vocational Education Employment Development Report (2022)," graduates from institutions engaged in school-enterprise cooperation exhibit a 12% higher employment rate. Furthermore, targeted vocational skills training correlates with improved job quality, higher placement rates in relevant fields, and increased starting salaries. Despite these positive outcomes, systemic challenges persist, including interest asymmetry between collaborating entities and the need for continuous, dynamic updates to training content to reflect technological advancements. This study, therefore, seeks to investigate the multifaceted impact of school-enterprise cooperation and vocational skills training on the employment competitiveness of vocational college students.

B. METHODS

This study employs a quantitative, cross-sectional research design to investigate the impact of school-enterprise cooperation and vocational skills training on the employment competitiveness of vocational college students. The primary objective is to analyze the relationships between key independent variables—demographic characteristics, school-enterprise cooperation, and vocational skills training—and the dependent variable, employment competitiveness. The findings are intended to provide empirical evidence and actionable recommendations for vocational colleges seeking to optimize student outcomes through strategic partnerships and training programs.

The target population for this research consists of students enrolled at Yunnan Economics Trade and Foreign Affairs College in 2024. The total student population is 2,335, distributed across 11 academic departments. A stratified random sampling method was utilized to ensure proportional representation from each department. A sample size of 351 participants was determined, representing approximately 15% of the total population. This sample size was calculated using the Yamane (1967) formula for a finite population with a 5% margin of error, yielding a minimum of 342, which was rounded up to 351 for robustness. Table 3.1 details the stratified sample allocation across departments.

Data were collected using a structured questionnaire administered via the Wenjuanxing online platform. The survey link was disseminated through various channels within the college, including classroom announcements, library notices, and departmental WeChat groups, to maximize reach and participation. The instrument was designed to gather data on four primary constructs: (1) demographic variables (e.g., gender, major, grade level), (2) perceptions of school-enterprise cooperation, (3) engagement with and satisfaction in vocational skills training, and (4) self-assessed employment competitiveness. Before full-scale deployment, the questionnaire underwent a pilot test with 30 participants to evaluate its clarity and functionality.

The primary research instrument was a self-administered questionnaire developed based on the study's conceptual framework and hypotheses. It comprised four sections corresponding to the key variables under investigation. The instrument's validity was established using the Item-Objective Congruence (IOC) index, evaluated by three experts. Items with an IOC score of 0.5 or higher were retained, ensuring the questionnaire's content validity. The scales' reliability

was confirmed using Cronbach's alpha, with all constructs achieving coefficients above 0.70 (Hair et al., 2020), indicating acceptable internal consistency.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). The analysis was conducted in two stages. First, descriptive statistics, including mean, standard deviation, and frequency, were computed to summarize the demographic profile of the respondents and the central tendencies of the key variables. The interpretation of mean scores followed the five-point Likert scale. Second, inferential statistics were employed to test the research hypotheses. Hypothesis 1 (H1), concerning differences in employment competitiveness across demographic groups, was tested using independent samples t-tests (for gender) and one-way ANOVA (for other categorical variables). Hypotheses 2 (H2) and 3 (H3), which examine the predictive influence of school-enterprise cooperation and vocational skills training on employment competitiveness, were tested using multiple linear regression analysis.

C. RESULT & DISCUSSION

Descriptive Statistics

Demographic Factors

Table 1 The Frequency and Percent Frequency Classified by Demographic Factor

Question	Option	Frequency	Percentage
1. Gender	Male	184	52.4
	Female	167	47.6
	Total	351	100.0
2. Address	Urban	243	69.2
	Rural	108	30.8
	Total	351	100.0
3. Major Category	Humanities and Social Sciences	143	40.7
	Science and Engineering	150	42.7
	Arts	29	8.3
	Medicine	29	8.3
	Total	351	100.0
4. Grade	First Year	105	29.9
	Second Year	107	30.5
	Third Year	117	33.3
	Last Year and Others	22	6.3
	Total	351	100.0
5. Parents' Educational Background	Primary School or Below	6	1.7
	Junior High School	93	26.5
	Associate Degree	110	31.3
	Bachelor	126	35.9
	Graduate Degree or Above	16	4.6
	Total	351	100.0

Descriptive statistics for the demographic characteristics of the 351 respondents are presented in Table 1. The sample is gender-balanced (52.4% male, 47.6% female) but exhibits significant imbalances elsewhere. A notable urban-rural disparity exists (69.2% vs. 30.8%), potentially affecting the generalizability of findings. The academic major distribution is skewed, with high concentrations in Science and Engineering (42.7%) and Humanities (40.7%), while Arts and Medicine are underrepresented (8.3% each). The sample is also heavily weighted towards underclassmen, with seniors comprising only 6.3%, which may limit longitudinal analysis. Parental education shows a bimodal distribution centered on bachelor's (35.9%) and vocational degrees (31.3%). These demographic imbalances across geography, discipline, academic year, and parental education must be considered as limitations when interpreting the

study's results.

School Enterprise Cooperation

Table 2. The Descriptive Statistics of School Enterprise Cooperatives

	N	Mean	Standard	Meaning	RANK
Measurement	351	3.6211	1.07783	Agree	4
Resource Investment	351	3.1425	1.00125	Agree	1
Organizational Implementation	351	3.3761	1.00904	Agree	3
Satisfaction Results	351	3.7208	1.00379	Agree	2
School Enterprise Cooperation	351	3.5897	0.87329	Agree	

Analysis of Table 2 reveals that respondents' perceptions of school-enterprise cooperation are generally positive, with the overall mean score of 3.59 indicating an above-average evaluation. Among the four dimensions, "Output of Results" received the highest mean (3.72), suggesting strong recognition of the program's achievements. However, "Resource Investment" was the lowest-rated dimension (mean 3.14), identified as an apparent weakness requiring prioritized improvement. The "Measures" dimension, despite its high mean (3.62), exhibited the highest standard deviation (1.08), signifying significant divergence in opinion. Similarly, the "Organizational Implementation" dimension showed a high standard deviation (1.01), suggesting execution inconsistencies. In summary, while the program's performance is viewed favorably, there is a critical need to improve resource allocation and address measurement and implementation inconsistencies to optimize its effectiveness further.

Vocational Skills Training

Table 3. The Descriptive Statistics of Vocational Skills Training

	N	Mean	Standard	Meaning	RANK
Technical Operation Skills	351	3.6524	1.05234	Agree	2
Industry Norms	351	3.7578	1.10637	Agree	1
Workplace Etiquette	351	3.3932	1.06603	Agree	3
Vocational Skills Training	351	3.6211	0.88899	Agree	

Table 3 indicates that respondents' perceptions of vocational skills training are generally positive, with all dimensions' means exceeding 3.3. The "Industry Norms" dimension had the highest mean (3.76), indicating strong recognition, yet also the highest standard deviation (1.11), suggesting significant divergences in opinion. "Technical Operation Skills" ranked second (mean 3.65, SD 1.05), indicating a need for greater standardization. Conversely, "Workplace Etiquette" was the lowest-rated dimension (mean 3.39, SD 1.07), highlighting it as a key area for improvement. In summary, while the training is viewed favorably, the high standard deviations across all dimensions reveal inconsistencies in student experiences.

Prioritizing the enhancement of workplace etiquette and standardizing technical skills training are crucial for optimizing the program's overall effectiveness.

Employment Competitiveness

Table 4 The Descriptive Statistics of Employment Competitiveness

	N	Mean	Standard	Meaning	RANK
Confidence	351	3.2735	1.07669	Agree	3

Competitive Advantage	351	3.8632	1.08422	Agree	1
Special Skills	351	3.6268	1.04759	Agree	2
Employment Competitiveness	351	3.6211	0.87929	Agree	

Table 4 reveals that respondents' self-assessed employment competitiveness is generally positive, with all variable means exceeding 3.0. The "Competitive Advantage" dimension had the highest mean (3.86) but also the highest standard deviation (1.08), indicating significant polarization in perceptions, likely due to varying individual backgrounds. The "Special Skills" dimension also scored highly but with a large standard deviation, suggesting inconsistencies in perceived practicality. Conversely, the "Confidence" dimension had the lowest mean (3.27) and the highest standard deviation, indicating it is a critical weakness and a source of significant divergence. In summary, while students recognize their competitive advantages, their confidence is comparatively low. This highlights a need for targeted psychological support and practical training to bridge the gap between perceived skills and actual market readiness, thereby reducing internal evaluation disparities.

Inferential Statistics

Differences in Demographic Factors Generate Differences in Employment Competitiveness

H1: Students with different demographic characteristics will exhibit varying levels of employment competitiveness.

Table 5. The Independent Samples t-test of the Gender Factor

Items	Gender	N	Mean	S.D.	t-value	p-value
Employment Competitiveness	Male	184	3.0598	0.61999	-16.823	0.000
	Female	167	4.2395	0.68732		

An independent samples t-test (Table 5) was conducted to compare employment competitiveness between genders. The analysis revealed a statistically significant difference ($t(335.659) = -16.823$, $p < 0.001$), leading to the rejection of the null hypothesis. The mean score for females ($M = 4.24$, $SD = 0.69$) was significantly higher than for males ($M = 3.06$, $SD = 0.62$), with a mean difference of 1.18. The effect size was large (Cohen's $d \approx 1.35$), indicating a substantial practical significance. These findings suggest that female students possess markedly higher self-assessed employment competitiveness than their male counterparts, highlighting a critical area for targeted intervention and further investigation.

Table 6. The Analysis Results on Address Difference Influence on Employment Competitiveness

Items	Gender	N	Mean	S.D.	t-value	p-value
Employment Competitiveness	Urban	243	3.4033	0.82441	-7.572	0.000
	Rural	108	4.1111	0.80109		

An independent-samples t-test (Table 6) revealed a statistically significant difference in employment competitiveness between urban and rural students ($t(210.788) = -7.572$, $p < 0.001$), leading to rejection of the null hypothesis. Rural students reported significantly higher mean scores ($M = 4.11$, $SD = 0.80$) compared to their urban counterparts ($M = 3.40$, $SD = 0.82$), with a mean difference of 0.71. The effect size was large (Cohen's $d \approx 0.88$), indicating substantial practical significance. This finding suggests that rural students have a markedly higher self-assessed employment competitiveness, potentially reflecting a greater appreciation of opportunities or differing levels of competitive pressure and self-evaluation compared to urban students.

Table 7. The Analysis Results on Major Category Difference Influence on Employment Competitiveness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	93.612	3	31.204	61.177	.000*
Within Groups	176.992	347	0.510		
Total	270.604	350			

Table 8. Illustrates the Differences in Multiple Comparisons of Major Category

Major	Group J	Humanities and Social Sciences	Science and Engineering	Arts	Medicine
Group I	(I-J)	3.0979	3.7733	4.2414	4.7931
Humanities and Social Sciences	3.0979	-	-0.67543 (.000*)	-1.14348 (.000*)	-1.69520 (.000*)
Science and Engineering	3.7733		-	-0.46805 (.001*)	-1.01977 (.000*)
Arts	4.2414			-	-0.55172 (.003*)
Medicine	4.7931				-

A one-way ANOVA (Tables 7 & 8) revealed a significant effect of academic major on employment competitiveness ($F(3, 347) = 61.177$, $p < 0.001$), with a large effect size ($\eta^2 \approx 0.346$). Post hoc comparisons (Table 4.8) established a clear hierarchy: Medicine (M=4.79) > Art (M=4.24) > Science & Engineering (M=3.77) > Humanities & Social Sciences (M=3.10). Medical students demonstrated a significant advantage over all other groups. Conversely, Humanities and Social Sciences students were at a significant disadvantage, particularly when compared to their Science and Engineering counterparts. These findings underscore substantial disparities in perceived employability across disciplines, likely reflecting variations in industry demand, skill specificity, and educational resources.

Table 9. The Analysis Results on Grade Difference Influence on Employment Competitiveness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	77.030	3	25.677	46.028	.000*
Within Groups	193.574	347	0.558		
Total	270.604	350			

Table 10. Illustrates the Differences in Multiple Comparisons of Grade

Grade	Group J	First Year	Second Year	Third Year	Last Year
Group I	(I-J)	3.1238	3.4019	4.0855	4.5909
First Year	3.1238	-	-0.27806 (.007*)	-0.96166 (.000*)	-1.46710 (.000*)
Second Year	3.4019		-	-0.68360 (.000*)	-1.18904 (.000*)
Third Year	4.0855			-	-0.50544 (.004*)
Last Year	4.5909				-

A one-way ANOVA (Tables 9 & 10) revealed a significant effect of academic year on

employment competitiveness ($F(3, 347) = 46.028$, $p < 0.001$), with a large effect size ($\eta^2 \approx 0.285$). Post hoc comparisons confirmed a clear, incremental hierarchy: seniors > juniors > sophomores > freshmen, with significant differences between all grade levels. This positive correlation suggests that employment competitiveness strengthens progressively throughout the academic program, likely due to the accumulation of practical experience, specialized coursework, and increased engagement with career development resources as students approach graduation. This highlights the developmental nature of employability skills within the university context.

Table 11. The Analysis Results on Parents' Educational Background Difference Influence on Employment Competitiveness

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	73.166	4	18.292	32.055	.000*
Within Groups	197.438	346	0.571		
Total	270.604	350			

Table 12. Illustrates the Differences in Multiple Comparisons of Parents' Educational Background

Parents' Educational Background	**Group J**	**Primary School or Below**	**Junior High School**	**Associate Degree**	**Bachelor**	**Graduate or Above**
Group I	(I-J)	3.0000	3.0645	3.4818	4.0556	4.6250
Primary School or Below	3.0000	-	-0.06452 (.839)	-0.48182 (.129)	-1.05556 (.000*)	-1.62500 (.000*)
Junior High School	3.0645		-	-0.41730 (.000*)	-0.99104 (.000*)	-1.56048 (.000*)
Associate Degree	3.4818			-	-0.57374 (.000*)	-1.14318 (.000*)
Bachelor	4.0556				-	-0.56944 (.005*)
Graduate or Above	4.6250					-

A one-way ANOVA (Table 11) revealed that parental education significantly impacts students' employment competitiveness ($F(4, 346) = 32.055$, $p < 0.001$), with a large effect size ($\eta^2 \approx 0.270$). Post hoc comparisons (Table 12) revealed a transparent, hierarchical gradient: competitiveness was highest for students whose parents held graduate degrees, followed by those with bachelor's, vocational, and junior high school degrees, and lowest for those with parents educated to the primary school level or below. These findings indicate a strong, positive correlation between parental educational attainment and offspring's perceived employability, suggesting the intergenerational transmission of advantage through resources and social capital.

School Enterprise Cooperation Influence on Employment Competitiveness

Hypothesis 2 (H2): School enterprise cooperation can significantly improve the employment competitiveness of vocational college students.

Table 13. Summarize the Model of School Enterprise Cooperation Influences on Employment Competitiveness

Model	**R**	**R Square**	**Adjusted R-Square**	**Std. Error of the Estimate**
3	.615[c]	.378	.373	.69618

c. Predictors: (Constant), School Enterprise Cooperation Organizational Implementation, School

Enterprise Cooperation Satisfaction Results, School Enterprise Cooperation Measurement

Table 14. The Multiple Linear Regression Coefficients for the Influence of School Enterprise Cooperation on Employment Competitiveness

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
Constant	1.244	.170		7.328	0.000**
Organizational Implementation	.295	.042	.339	6.960	0.000**
Satisfaction Results	.202	.038	.248	5.329	0.000**
Measurement	.173	.039	.213	4.479	0.000**

a. Dependent Variable: Employment Competitiveness

The multiple linear regression analysis (Table 13) confirms Hypothesis 2, demonstrating that school-enterprise cooperation significantly predicts employment competitiveness. The model, which includes organizational implementation, satisfaction outcomes, and measurement as predictors, explains 37.8% of the variance in employment competitiveness (R^2 = 0.378, Adjusted R^2 = 0.373). All three variables were significant positive predictors. Organizational implementation emerged as the most influential factor (β = 0.339, $p < 0.001$), followed by satisfaction outcomes (β = 0.248, $p < 0.001$) and measurement (β = 0.213, $p < 0.001$). The regression equation is: Employment Competitiveness = 1.244 + 0.295*(Organizational Implementation) + 0.202*(Satisfaction) + 0.173*(Measurement). These findings underscore that the practical execution of cooperative initiatives is the primary driver of student competitiveness. To enhance outcomes, institutions should prioritize optimizing organizational frameworks, such as co-developing curricula and training bases, while also leveraging student feedback and data-driven monitoring to ensure the quality and relevance of these partnerships.

Vocational Skills Training Influence on Employment Competitiveness

Hypothesis 3 (H3): Vocational skills training can effectively enhance the professional skills and employment competitiveness of vocational college students.

Table 15. Summarize the Model of Vocational Skills Training Influences on Employment Competitiveness

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
3	.532[c]	.283	.277	.74787

c. Predictors: (Constant), Technical Operation Skills, Industry Norms, Workplace Etiquette

Table 16. The Multiple Linear Regression Coefficients for the Influence of Vocational Skills Training on Employment Competitiveness

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
Constant	1.602	.180		8.919	0.000**
Technical Operation Skills	.254	.046	.304	5.554	0.000**
Industry Norms	.155	.040	.195	3.919	0.000**
Workplace Etiquette	.150	.043	.182	3.494	0.000**

a. Dependent Variable: Employment Competitiveness

The multiple linear regression analysis (Table 15) confirms Hypothesis 3, establishing a significant positive relationship between vocational skills training and employment competitiveness. The model, incorporating technical operation skills, industry norms, and workplace etiquette, explains 28.3% of the variance in employment competitiveness (R^2 = 0.283, Adjusted R^2 = 0.277). The regression equation is: Employment Competitiveness = 1.602 + 0.254*(Technical Skills) + 0.155*(Industry Norms) + 0.150*(Workplace Etiquette). All three predictors were statistically significant. Technical operation skills emerged as the most influential factor, followed by industry norms and then workplace etiquette. These findings indicate that while all components of vocational training are beneficial, the development of practical, hands-on technical skills is the most critical driver of students' immediate employment competitiveness. Therefore, institutions should prioritize allocating resources to enhance practical training, such as through school-enterprise labs and simulated projects, to maximize student employability.

D. CONCLUSION

This study conducted a multidimensional analysis to explore the impact of factors such as gender, urban-rural background, major category, grade level, parental education level, school-enterprise cooperation, and vocational skills training on employment competitiveness. The research conclusions drawn from this article are as follows:

Impact of Demographic Differences on Employment Competitiveness: Through analyses of demographic characteristics, educational backgrounds and resources, as well as training and school-enterprise cooperation, we found significant differences in competitiveness across groups. Specifically, in terms of gender, women's competitiveness is significantly higher than men's, with a mean difference of 1.18 (p=0.000), which may be related to career-planning awareness or industry-choice preferences. In the comparison between urban and rural areas, the average competitiveness of rural students (4.11) is significantly higher than that of urban students (3.40), reflecting differential accumulation of educational resources and employment support in urban and rural areas. In terms of grade level, competitiveness increases with grade level, with seniors having the highest, followed by juniors, sophomores, and freshmen. This indicates that senior students have gained key advantages through internships and skill accumulation. In terms of parental education level, children from families with graduate degrees or higher have a significant advantage in competitiveness, with an average of 4.63, reflecting the considerable effect of intergenerational educational transmission. The lack of significant differences in competitiveness between the vocational and junior high school groups may be due to resource scarcity, which leads to convergence. In terms of professional categories, medical students have the highest competitiveness, with an average of 4.79; art and science majors come second; humanities and social sciences majors have the lowest average, with an average of 3.10. This difference reflects the degree of mismatch between market demand and training objectives. In terms of vocational skills training, technical operation skills contribute the most to competitiveness (Beta=0.304), followed by industry standards (Beta=0.195), while the role of workplace etiquette is relatively limited (Beta=0.182).

Impact of School Enterprise Cooperation Differences on Employment Competitiveness: The implementation methods, satisfaction results, and safeguard measures all have a significant positive impact on employment competitiveness (p-values are all less than 0.001). Among them, the impact of organizational implementation methods is the greatest, with a non-standardized coefficient (B) of 0.295, indicating that for every 1-unit increase in organizational implementation methods, employment competitiveness increases by 0.295 points. The satisfaction results have a secondary impact on employment competitiveness, with a non-standardized coefficient of 0.202 and a standardized coefficient (Beta) of 0.248, indicating that for every 1-unit increase in students' recognition of cooperative projects, employment competitiveness will increase by 0.202 points. The non-standardized coefficient for the measurement factor is 0.173, and the standardized coefficient is 0.213. Although it also has a positive impact on employment competitiveness, its contribution is relatively small. In

summary, the organizational implementation method has the greatest impact on employment competitiveness, followed by satisfaction results, and finally by measurement factors.

Impact of Vocational Skills Training Differences on Employment Competitiveness: When analyzing the impact of vocational skills training on employment competitiveness, we found that the three aspects that measure vocational skills training: technical operation skills, industry standards, and workplace etiquette, all have a significant positive impact on employment competitiveness, but the degree of impact varies significantly. Among them, the contribution of technical operation skills to employment competitiveness is the most prominent, with a non-standardized coefficient (B) of 0.254, a standardized coefficient (Beta) of 0.304, a t-value of 5.554, and a p-value of 0.000, indicating extremely significant results. This suggests that technical operational skills are the core driver of employment competitiveness. Secondly, industry standards also have a significant positive impact on employment competitiveness, with a non-standardized coefficient (B) of 0.155, a standardized coefficient (Beta) of 0.195, a t-value of 3.919, and a p-value of 0.000, which is extremely significant. This indicates that industry standards are a secondary core factor in employment competitiveness. Mastering industry norms, such as safety standards and operating procedures, can enhance the profession's credibility and thus improve employment competitiveness. Finally, the impact of workplace etiquette on employment competitiveness is relatively small, with a non-standardized coefficient (B) of 0.150, a standardized coefficient (Beta) of 0.182, a t-value of 3.494, and a p-value of 0.000, which is statistically significant. This indicates that workplace etiquette is an auxiliary factor in employment competitiveness.

In summary, the quantitative and qualitative results indicate that school-enterprise cooperation and vocational skills training are essential ways to improve the employment competitiveness of vocational college students. This provides a theoretical basis and practical path for universities to promote the development of high-quality vocational education.

REFERENCES

Chen, J. (2020). Research on strategies to enhance the employment competitiveness of students in higher vocational colleges under the new situation. (Master's thesis). Nanchang University.

Chen, J. P. (2020). Reflections on the sustainable development of "school-enterprise cooperation, work-study integration" in higher vocational colleges. Education and Vocational, (18), 56-57.

Chen, Y. J., Wang, H. D., & Mao, C. G. (2021). Analysis of factors influencing laborers' participation in vocational skills training and training effects: Based on a survey of 13 provinces and cities. China Labor, 01, 45-63.

Feng, X. Y., & Li, Y. (2020). Current situation and reflections on the development of adult non-degree education in universities: A case study of Yunnan Province. Adult Education, 35(11), 69-73.

Fu, X. (2019). Self-perception survey of employment competitiveness of vocational students and research on improvement strategies. (Master's thesis). Hebei University of Science and Technology.

Fu, X. (2020). STC: The direction of American vocational technical education in the 21st century. (Doctoral dissertation). East China Normal University.

Fu, X. N. (2019). Survey on self-awareness of employment competitiveness of higher vocational students and strategies for improvement (Master's thesis). Hebei University of Science and Technology, 35.

Gong, C., & Wang, Y. (2024). The deficiencies in employment competitiveness of students in higher vocational colleges and strategies for improvement. Education and Vocational, 2024(26), 99-100.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). Multivariate data analysis (7th ed.). Pearson.

Huang, F. (2021). Research on the innovation of vocational training systems in higher vocational

colleges specializing in rail transit. Education and Vocational Education, 24, 103-106.
Lai, P. C., & Huang, R. (2024). A study on the factors influencing student satisfaction in vocational college based on the customer satisfaction theory model. Advances in Vocational and Technical Education, 6(2), 96-101.
Li, H., & Wang, X. (2020). The role of practical training in the adoption of new technologies in enterprises. Technology Management Review, 12(4), 88-98.
Li, J., & Zhang, T. (2022). Curriculum optimization in response to industry demands: A case study of university-industry collaboration. International Journal of Educational Management, 36(2), 235-248.
Li, T., & Zhao, W. (2018). Analysis of the development path of the lifelong vocational skills training system. China Vocational and Technical Education, 2018(30), 49-56.
Li, Y. (2021). Exploration of curriculum construction in non-degree education in higher education institutions. Adult Education, 41(10), 71-74.
Liang, G. W. (2023). Study on the employment competitiveness of master's students in Chinese international education [Master's thesis, Guangxi University for Nationalities].
Lin, Y. (2020). Ten years of research on competency in China. Journal of China Pudong Cadre College, 4(03), 84-89.
Liu, B. (2018). Research on lifelong vocational skills training in universities from a social demand perspective. Higher Education Journal, 94(22), 135-137.
Liu, C. L., & Yang, P. (2024). Issues and developmental paths of school-enterprise cooperation in higher vocational education. Heilongjiang Higher Education Research, (01), 112-114.
Liu, L. (2022). Thoughts on cultivating the employment core competitiveness of students in higher vocational colleges. New West (Theory Edition), 2022(10), 131+87.
Liu, Q. (2020). Research on employment guidance issues for college students at Shijiazhuang Vocational Technology College. (Master's thesis). Yanshan University.
Liu, Z. M., & Wu, B. (2019). Research on the influencing factors of enterprise participation in school-enterprise cooperation for talent cultivation in higher vocational colleges. Higher Engineering Education Research, (02), 143-147.
Long, S. (2018). Research on the employment core competitiveness of electronic information students: Status and countermeasures. (Master's thesis). Guangxi Normal University.
Lou, J. (2021). On the cultivation of employment competitiveness of college students in higher vocational colleges. Economic Issues Exploration, 2021(05), 96-100.
Lu, Y. (2021). Research on the employment competitiveness of higher vocational students during the pandemic and paths for improvement: A case study of four higher vocational institutions in Shanghai. Education and Teaching Forum, (40), 153-156.
Luo, H. (2024). Research on the evaluation system of employment competitiveness of students in Shaanxi vocational colleges. (Master's thesis). Xi'an University of Technology.
Qian, C. (2024). Thoughts and practices on strengthening vocational skills training under the "school-government-enterprise" cooperation model. Continuing Education Research, 9, 41-42.
Qiang, L. (2024). Research on the employment competitiveness of graduates from Shenzhen A Vocational School. (Master's thesis). Xiamen University.
Qin, L. (2022). Research on the management mechanism of vocational skills training certification in private colleges under new business formats [Master's thesis, Hebei Normal University].
Qu, S. (2022). Exploration and practice of enhancing the employment competitiveness of students in higher vocational colleges. Education and Vocational, 2022(23), 88-89.
Shi, F. (2019). Empirical research on public vocational training for college students in Wuhan. Vocational and Technical Education, 37(08), 34-37.
Sun, W. H. (2021). Exploring school-enterprise cooperation models to cultivate outstanding skilled talents. Educational Development Research, (07), 23-25.
Wang, H., & Liang, Y. M. (2022). A review of research on performance evaluation of industry-university-research cooperation. Science and Technology Management Research, 31(11),

56-61 + 55.
Wang, H., & Liu, S. (2021). Shared resources in university-industry partnerships: Impact on practical training and student employability. Journal of Vocational Education & Training, 73(4), 501-519.
Wang, J. Y. (2022). Practices, issues, and lessons of vocational training in vocational colleges in ethnic minority areas of Guizhou Province. Guizhou Ethnic Studies, 43(03), 174-178.
Wang, J., Fan, G., & Cha, Y. (2022). Employment competitiveness of vocational college students: Target positioning basis and constituent elements. China Vocational and Technical Education, 2022(09), 37-40.
Wang, R., Wei, Z., & Chen, J. (2023). The models, experiences, and implications of vocational skill training in the U.S., Germany, and Japan. Education and Vocational, 2023(10), 94-101.
Wang, S. L., & Zhang, X. L. (2023). Ways to implement vocational training in higher vocational colleges. China Higher Education, 17, 48-49.
Wei, H. Y., & Fu, J. (2020). Factors affecting employee satisfaction with internal training in internet companies: A case study of Beijing R Company. Economic Research Reference, 55, 90-95.
Wu, B. (2019). The impact of the differences in the main body of higher vocational colleges on school-enterprise cooperation: A new institutional economics perspective. China Vocational and Technical Education, (30), 66-71, 85.
Wu, Y., & Zeng, S. W. (2022). Value, difficulties, and countermeasures of vocational skills training in the context of building a skills-based society. Education and Vocational Education, 17, 13-20.
Xia, J. G. (2020). Innovative exploration of school-enterprise joint talent cultivation. Chinese University of Science and Technology & Industrialization, 12, 10-12.
Xia, Y., Qiang, W., & Wang, X. J. (2019). Research on the current situation and improvement countermeasures of vocational skills training in higher education institutions. Contemporary Educational Practice and Teaching Research, 21, 139-140.
Xiang, Y. H. (2018). Thoughts on the evaluation of vocational training performance of skilled talents in higher vocational colleges. Vocational Education Forum, 06, 163-166.
Xu, B. B. (2020). Vocational skills enhancement training: Lessons from Germany's vocational continuing education experience. Adult Education, 40(08), 90-93.
Xu, F. (2019). Strategies for integrating higher vocational colleges into the lifelong vocational education and training system. Adult Education, 39(09), 73-76.
Xu, F. (2022). Survey on the employment status and countermeasures of physical education graduates from Suzhou Vocational University. Science and Technology Information, 2022(30), 298.
Xu, N., Chen, J., & Li, X. (2019). Exploration of improving the level of vocational skills training in higher vocational colleges. Chinese Universities Science and Technology, 2019(05), 53-55.
Yamane, Y. (1967). Mathematical formulae for sample size determination.
Yang, T. H., Chen, X. X., & Ding, F. (2018). Micro-courses: A new idea for vocational skills training curriculum construction. Vocational Education Forum, 08, 55-58.
Ye, J. J., Li, Y. P., Huang, J. F., et al. (2019). Study on the satisfaction of standardized training for resident physicians in Fujian Province: Based on structural equation modeling. Chinese Health Policy Research, 9(04), 49-54.
Yi, X. H., Wen, Y. M., & Chen, Z. Y. (2024). A twenty-year review of school-enterprise cooperation research in China. Higher Education Forum, (02), 36-41, 68.
Yi, Y. (2024). Study on the satisfaction of vocational skills training in higher education institutions [Doctoral dissertation, Jiangxi University of Finance and Economics.
Yu, F., & She, Y. Z. (2017). Feasibility study on building a vocational skills training MOOC platform jointly constructed by schools, industries, and enterprises. Vocational Education Forum, 673(21), 81-85.
Yu, H., Li, H., & Huang, Y. P. (2024). The significance, issues, and improvement measures of

school-enterprise cooperation in higher vocational colleges. Education and Vocational, (23), 34-35.
Zhang, J., & Xu, T. (2019). Customized training strategies for emerging technologies in modern enterprises. International Journal of Training and Development, 14(2), 234-250.
Zhang, Q., Xie, Y. Q., & Qiao, W. B. (2021). Directions and routes of curriculum reform in vocational colleges under the 1+X certification system. Adult Education, 41(08), 49-53.
Zhang, X. X., Zeng, Q. Q., Hou, L. R., et al. (2022). Factors influencing satisfaction with postgraduate medical training quality. Chinese Health Economics, 41(12), 98-100 + 109.
Zhang, X. Y., & Li, Y. Y. (2019). Study on the training satisfaction of new generation migrant workers. Vocational Education Forum, 06, 77-84.
Zhang, X., & Ke, Y. (2021). Improving university students' employability from the perspective of evaluation indicators. Journal of Jiaxing University, 2021(01), 112-116.
Zhang, X., & Zhou, Y. (2023). Enhancing employability through internships: A framework for university-enterprise cooperation. Education and Training, 65(5), 618-631.
Zhang, Y. (2024). Analysis of talent cultivation paths for improving the employment competitiveness of higher vocational students. Vocational Education Forum, (35), 17-19.
Zhang, Y. (2024). Exploration of the talent training path of higher vocational colleges based on improving students' employment competitiveness. Vocational Education Forum, 2024(35), 17-19.
Zhao, C., & Li, Y. (2020). The significance, challenges, and strategies for promoting vocational training in higher vocational colleges. Adult Education, 40(07), 63-68.
Zheng, A., & Li, L. (2024). Logic, challenges, and strategies of lifelong vocational skills training under the goal of high-quality full employment. Education and Vocational, 2024(01), 29-36.
Zheng, Y. (2020). Current situation and improvement paths of employment competitiveness in vocational colleges. China Adult Education, 2020(24), 107-110.
Zhou, G., & Wu, Z. (2021). Research and practice on the vocational training model of higher vocational colleges based on the concept of mutual promotion between education and training. Education and Vocational, 2021(22), 46-50.
Zhou, Z., & Chen, X. (2022). Opportunities, challenges, and transformations of vocational colleges under the national vocational skills training system. Education and Vocational, 2022(14), 21-28.
Zhu, J. H. (2024). Research on the construction of the quality evaluation index system for school-enterprise cooperation in higher vocational colleges [Doctoral dissertation, Shandong Normal University].
Zhuang, X. J. (2018). Empirical study on the influencing factors of school-enterprise cooperation in higher vocational colleges. Vocational and Technical Education, 39(31), 51-55.
Zou, J. (2024). The connotation of school-enterprise cooperation models in higher vocational colleges and the construction of evaluation index systems. Modern Education Management, (06), 104-107.