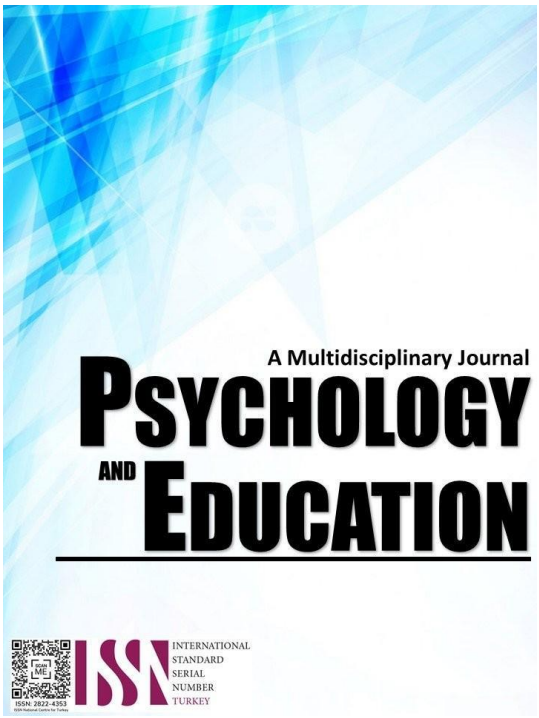
FROM CLASSROOM TO CAREER: INNOVATION IN ENTREPRENEURSHIP EDUCATION AND STUDENT EMPLOYMENT COMPETITIVENESS AMONG COLLEGES IN JIANGXI, CHINA



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Research Article

From Classroom to Career: Innovation in Entrepreneurship Education and Student Employment Competitiveness among Colleges in Jiangxi, China

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Abstract

This study explores the impact of innovation in entrepreneurship education on the employment competitiveness of students in Jiangxi vocational colleges. Using data from questionnaires distributed to 144 educators and 134 employment managers across 63 colleges, we examine eight dimensions of innovation in entrepreneurship education and their correlation with students' employability. Findings reveal that Jiangxi colleges excel in learning ability, innovative practice, and thinking education, underscoring the importance of practical training. Notably, factors such as enrollment size, academic program, and geographic location were found to have no significant effect on employment competitiveness. Positive correlations between objective management, interpersonal skills, learning ability, and innovative thinking with employment competitiveness were identified. To enhance the quality of entrepreneurship education, we recommend curriculum strengthening, increased practical opportunities, investment in teacher training, and refinement of evaluation systems. Limitations regarding sample size and geographic scope suggest avenues for future research.

Keywords: *Innovation and Entrepreneurship education, Employment competitiveness, Professional competitiveness, Employment quality competitiveness*

Introduction

Jiangxi Province, located in southeastern China, has made significant progress in vocational education through the expansion of Higher Vocational Colleges (HVCs), which play a crucial role in cultivating skilled technical personnel. Such institutions contribute meaningfully to the regional socio-economic growth, aligning student outcomes with labor-market demands (Zhang, 2022). In China, higher vocational education (HVE) emphasizes practical skill development and career readiness, differentiating it from counterparts in Australia, Germany, and the U.S. (Liu, 2022). Regional educational policies in Jiangxi have strategically concentrated HVCs in Nanchang (the provincial capital) and in Ganzhou often referred to as its southern gateway leveraging proximity to the Pearl River Delta's industrial clusters (Xie et al., 2022).

By 2023, Jiangxi's HVCs enrolled 227,251 students, marking an 8 % increase compared to 2022, with Nanchang alone accounting for roughly 40 % of the total, and Ganzhou exhibiting the highest enrollment growth tied to coastal industrial expansion (Chen et al., 2022). Over half of these students (55 %) are enrolled in science and engineering programs, reflecting the province's commitment to strengthening its manufacturing and electronics workforce (Zhang & Li, 2023). However, despite increasing enrollment and industry-aligned training, questions remain regarding the employment competitiveness of HVC graduates (Xu & Li, 2023).

Innovation and Entrepreneurship education (I&E) is widely regarded as a key lever for enhancing graduate employability by fostering problem-solving, collaboration, and career adaptability. International studies, such as those conducted at Grenoble École de Management, have shown that I&E modular training increases startup survival rates by approximately 40 % (Incubagem report, 2022). Yet, within Jiangxi, empirical research on I&E's impact is scarce, with existing literature primarily qualitative (Xie et al., 2022). To address this gap, Teng & Du (2023) propose a three-dimensional evaluation framework spanning innovation capacity, execution capability, and market adaptability highlighting the need for more quantitative evaluations. Addressing this need may support the development of evidence-based policies and curricula that effectively bridge vocational education and labor-market success.

This study aimed to examine the relationship between innovation in entrepreneurship education and student employment competitiveness among colleges in Jiangxi, China. Specifically, it sought to (1) profile participating colleges based on enrollment size, academic programs offered, and geographic location; (2) assess the level of innovation in entrepreneurship education across key dimensions, namely, objective management ability, interpersonal skills, execution ability, decision-making ability, learning ability, innovation and entrepreneurship practices, innovative thinking and mindset, and overall quality and ability; (3) evaluate students' employment competitiveness in terms of professionalism, employment quality, employment awareness, and the cultivation of logical thinking skills; and (4) determine the correlation between innovation in entrepreneurship education and student employment competitiveness. This study tested the null hypothesis that no significant relationship exists between innovation and entrepreneurship education and students' employment competitiveness.

Methodology

Research Design

This study employs a survey–correlational research design to examine the relationship between innovation and entrepreneurship education (IEE) and employment competitiveness among students in higher vocational colleges (HVCs) in Jiangxi Province, China.

This design is appropriate for identifying and quantifying the strength and direction of relationships between multiple variables in educational research settings (Somekh & Lewin, 2005).

Respondents

The study involved 144 innovation and entrepreneurship educators and 134 employment managers from 63 higher vocational colleges across Jiangxi Province. Participants were selected using Slovin's formula to ensure statistical representativeness of the population (Statology, 2023; Tejada & Punzalan, 2012). A simple random sampling method using a random number generator was applied to eliminate selection bias. This two-group sample allows for a comprehensive evaluation of both the delivery and the outcomes of IEE.

Instrument

A researcher-developed questionnaire was used to gather quantitative data. The instrument was based on existing literature and was subjected to expert validation and pilot testing to ensure content validity and reliability. It consists of two parts:

Part One assesses the level of innovation and entrepreneurship education across eight dimensions (e.g., objective management ability, interpersonal skills, decision-making ability).

Part Two evaluates employment competitiveness using indicators such as professionalism, employment quality, and employment awareness.

The instrument was measured using a Likert scale, and responses were assigned corresponding point values for computation and analysis.

Procedure

During the academic year 2024–2025, the data were collected using Questionnaire Star (Wenjuanxing) a widely used Chinese online platform known for its survey design and data security features (Mei & Brown, 2018). Participants accessed the survey via email and QR code links. After the data collection phase, responses were systematically sorted, encoded, and prepared for analysis by the research team.

Data Analysis

Descriptive statistics such as frequency counts, percentages, means, and standard deviations were used to summarize demographic variables and evaluate the levels of IEE and employment competitiveness.

Inferential statistics, including t-tests, ANOVA, and Pearson's r, were utilized to determine significant differences and relationships between variables. All analyses were performed at a 0.05 alpha level.

Data were tested for normality and transformed when necessary to meet parametric assumptions. These analytical techniques align with best practices in quantitative educational research (Somekh & Lewin, 2005).

Ethical Consideration

This study adhered strictly to established ethical research standards, including respect for persons, informed consent, voluntary participation, and confidentiality.

Participants were provided with detailed consent forms outlining the study's objectives, procedures, benefits, and risks. They were informed of their right to withdraw at any stage without penalty. Responses were anonymized and data were stored securely in compliance with the Data Privacy Act, with a retention plan for up to 10 years.

The study posed minimal risk and sought to contribute to the academic field, policy-making, and local economic development by offering insights on the integration of IEE in vocational education. No conflicts of interest were declared.

Results and Discussion

The data presented in Table 1 offers a comprehensive overview of the distribution of participants categorized by school profiles as identified by employment managers. The group comprises 134 participants and can be broken down based on enrollment size, academic program, and geographic location. Regarding enrollment size, a slight majority, or 47.2% (68 participants), hail from institutions with more than 10,000 students, while 45.8% (66 participants) come from schools with fewer than 10,000.

The academic program representation shows a reasonably even distribution: non-science and engineering students compose 27.1% (39 participants), while those from science and engineering disciplines account for 32.6% (47). The largest segment, however, consists of students with backgrounds in both liberal arts and science/engineering, making up 33.3% (48 participants).

Geographically, the largest proportion of participants, 44.0% (59 participants), are from the largest city, followed by 29.1% (39 participants) from the provincial capital and 26.9% (36 participants) from other locations.

Table 1. *Distribution of Participants Based on School Profile as determined by Employment Managers*

Category	*f*	*%*
Entire Group	134	100.0
Enrollment size		
Less than 10,000 Students	66	45.8
More than 10,000	68	47.2
Academic Program		
Non-Science and Engineering Students	39	27.1
Student of Science and Engineering	47	32.6
Both Liberal Arts and Science/Engineering Students	48	33.3
Location		
Provincial Capital	39	29.1
Largest City	59	44.0
Others	36	26.9

Table 2 provides a comprehensive breakdown of participants in the study based on various school profiles as evaluated by Entrepreneurship Educators. The total sample consists of 144 respondents, representing a complete response rate of 100%. Regarding enrollment size, participants from institutions with fewer than 10,000 students account for 45.1% (65 participants), while those from larger schools exceed 54.9% (79 participants).

In terms of location, 35.4% (51 participants) come from schools in provincial capitals, 29.9% (43 participants) are from the most significant cities, and the remaining 34.7% (50 participants) are from schools classified as "Others." When looking at academic programs, students in non-science and engineering fields represent 16.7% (24 participants), those in science and engineering make up 25.0% (36 participants), and the largest group is found in programs that combine liberal arts with science and engineering, totaling 58.3% (84 participants). This detailed distribution highlights the diverse backgrounds of participants in entrepreneurship education, enriching the understanding of their respective educational contexts.

Table 2. *Distribution of Participants Based on School Profile as determined by Entrepreneurship Educators*

Category	*f*	*%*
Entire Group	144	100.0
Enrollment size		
Less than 10,000 Students	65	45.1
More than 10,000	79	54.9
Location		
Provincial Capital	51	35.4
Largest City	43	29.9
Others	50	34.7
Academic Program		
Non-Science and Engineering Students	24	16.7
Student of Science and Engineering	36	25.0
Both Liberal Arts and Science/Engineering	84	58.3

Table 3 presents the Pearson's correlation coefficients (r) assessing the influence of Employment Competitiveness including its three dimensions: Professionalism, Employment Quality, and Employment Awareness on Innovation in Entrepreneurship Education and its eight constituent dimensions. The results demonstrate that overall Employment Competitiveness is significantly and positively correlated with Innovation in Entrepreneurship Education ($r = .351$, $p < 0.001$), as well as with all its sub-dimensions, with the highest correlation observed for Interpersonal Ability ($r = .366$, $p < 0.001$).

Among the three dimensions of Employment Competitiveness, Employment Awareness showed the strongest significant associations, positively correlating with five dimensions of Innovation in Entrepreneurship Education: Interpersonal Ability ($r = .224$, $p = 0.009$), Executive Ability ($r = .184$, $p = 0.033$), and Innovation and Entrepreneurship Practices ($r = .197$, $p = 0.022$), among others. Professionalism also exhibited modest yet statistically significant correlations with Interpersonal Ability ($r = .206$, $p = 0.017$), Executive Ability ($r = .204$, $p = 0.018$), and Innovation and Entrepreneurship Practices ($r = .186$, $p = 0.032$).

Meanwhile, Employment Quality demonstrated weaker associations overall, with significant correlations limited to Interpersonal Ability ($r = .204$, $p = 0.018$) and Innovation and Entrepreneurship Practices ($r = .181$, $p = 0.036$). The dimension of Innovative Thinking and Spiritual, as well as General Quality and Ability, did not show statistically significant relationships with any of the subcomponents of Employment Quality and Professionalism.

These findings suggest that Employment Competitiveness particularly through the lens of Employment Awareness and Professionalism may play a pivotal role in fostering innovation capabilities among students within entrepreneurship education contexts.

Table 3. *The Pearson's r showing the Influence of Employment Competitiveness and its Three Dimensions to the Innovation in Entrepreneurship Education and its Eight Dimensions*

Variables	*Employment Competitiveness*		*Professionalism*		*Employment Quality*		*Employment Awareness*	
	r	*r Prob*	*r*	*r Prob*	*r*	*r Prob*	*r*	*r Prob*
Innovation and Entrepreneurship Education	.351**	<0.001	0.169	0.051	0.151	0.082	.178*	0.039
Objective Management Ability	.298**	<0.001	0.134	0.123	0.124	0.153	0.165	0.056
Interpersonal Ability	.366**	<0.001	.206*	0.017	.204*	0.018	.224*	0.009
Executive Ability	.312**	<0.001	0.141	0.105	0.14	0.107	.184*	0.033
Decision Making Ability	.260**	0.002	0.084	0.336	0.079	0.365	0.114	0.19
Learning Ability	.305**	<0.001	0.16	0.065	0.114	0.192	0.138	0.111
Innovation and Entrepreneurship Practices	.347**	<0.001	.186*	0.032	.181*	0.036	.197*	0.022
Innovative Thinking and Spiritual	.270**	<0.001	0.115	0.187	0.093	0.286	0.103	0.237
General Quality and Ability	.282**	0.001	0.153	0.078	0.118	0.176	0.121	0.165

*** Correlation is significant at the 0.05 level (2-tailed).*

The findings of this study confirm a significant and positive association between innovation in entrepreneurship education (IEE) and employment competitiveness among students in Jiangxi's higher vocational colleges. Specifically, the moderate correlation ($r = .351$, $p < 0.001$) between the overall IEE construct and employment competitiveness supports the argument advanced by Wen and Deng (2023), who emphasized that integrated entrepreneurial curricula enhance students' adaptability and professional value in increasingly competitive labor markets.

The strong correlations of specific IEE components namely interpersonal ability ($r = .366$), execution ability ($r = .312$), and innovation and entrepreneurship practices ($r = .347$) with employment competitiveness reflect prior findings by Han (2024) and Ding (2024), who found that practical, collaborative, and experience-based learning significantly boosts student employability through skill acquisition and professional preparedness.

Moreover, employment awareness a distinct subdimension of employment competitiveness was significantly linked to interpersonal skills ($r = .224$, $p = 0.009$), executive ability ($r = .184$, $p = 0.033$), and entrepreneurship practices ($r = .197$, $p = 0.022$). This is consistent with Zhou et al. (2015), who highlighted the role of applied skills training and entrepreneurial thinking in enhancing students' market adaptability and job-search success.

The relatively weaker correlations between decision-making ability and employment quality ($r = .079$, $p = 0.365$), as well as between professionalism and several IEE components (e.g., objective management, $r = 0.134$, $p = 0.123$), suggest potential misalignments between cognitively focused educational content and the practical criteria used by employers. As Xiao (2006) observed in a study of Yichun University, this may reflect an inadequate feedback loop between academia and industry, necessitating more structured consultation mechanisms in curriculum design.

While some assume that demographic or institutional variables such as enrollment size or location significantly shape outcomes, the present data reveal only minor variations. This observation supports Zhang (2025), who argued that pedagogy and student engagement strategies rather than institutional scale are more decisive in shaping graduate competitiveness.

Lastly, the role of intrinsic motivation and professional identity development is underlined by the findings, echoing Zhou (2021), who asserted that internal psychological traits and affective skillsets such as interpersonal communication may be more influential for long-term employability than technical qualifications alone.

These insights affirm the transformative role of IEE in building employment competitiveness but also indicate areas requiring deeper refinement. Specifically, integrating industry-based simulations, decision-making laboratories, and soft skills training into curricula would likely enhance educational relevance. Further research should involve longitudinal tracking of graduates and comparative studies across regions to expand the generalizability of these findings.

Conclusions

This study contributes to the growing body of literature on innovation in entrepreneurship education (IEE) by empirically demonstrating its significant role in enhancing student employment competitiveness within the context of higher vocational colleges in Jiangxi, China. By employing a robust survey design involving both educators and employment officers, the study establishes a multidimensional relationship between IEE and employment competitiveness, particularly highlighting the influence of interpersonal ability, executive competence, and entrepreneurial practice on professional readiness.

Beyond confirming established assumptions, the findings advance the field by integrating both pedagogical and managerial perspectives, offering a holistic understanding of how IEE translates into employability outcomes. While previous studies emphasized the theoretical value of IEE, this study provides quantitative support for its practical benefits and reveals specific curricular dimensions with the strongest correlations to employment outcomes. In doing so, it validates calls from prior scholars for the strategic alignment

of innovation training with labor market demands.

Practically, this research supports the implementation of competency-based, integrated curricula, and recommends further investment in faculty development, experiential learning platforms, and systematic assessment tools. It also encourages policymakers to tailor vocational education policies that emphasize employability as a core outcome of innovation programs.

Future research should expand the geographical scope beyond Jiangxi to test the generalizability of these findings across diverse institutional settings. Longitudinal studies tracking graduate employment trajectories, as well as mixed-method evaluations involving employer feedback, could enrich understanding of how IEE interventions impact long-term career development. This line of inquiry is especially relevant as China continues to position vocational education as a pillar of economic transformation and workforce modernization.

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