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The Impact of Vocational College Teachers' Enterprise Practice Experience on Students' Job Matching

Yang Lingyun[1] & Nurfaradilla Mohamad Nasri[1]

[1] Faculty of Education, Universiti Kebangsaan Malaysia (UKM), Malaysia

Correspondence: Yang Lingyun, Faculty of Education, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor, Malaysia. E-mail: p142750@siswa.ukm.edu.my

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Abstract

This study examines the relationship between the duration of vocational college teachers' enterprise practice experience and the job–position matching of their students, using both institutional evaluations and students' self-assessments. Data were collected from 271 graduates of the School of Robotics and Intelligent Manufacturing at Jiangxi University of Science and Technology. The analysis employed descriptive statistics, correlation analysis, one-way analysis of variance (ANOVA), and Tukey's post hoc tests to compare three teacher experience groups (0–2 years, 2–4 years, and over 4 years). Results show a significant positive association between longer enterprise practice and higher institutional job–position matching scores, with the best outcomes for students taught by teachers with over four years of industry experience. While students' self-assessments also increased with teacher experience, the differences were not statistically significant. Students consistently rated their job–position match higher than institutional evaluations, reflecting possible differences in assessment perspectives. These findings emphasize the value of sustained industry engagement for teachers in enhancing the alignment between vocational education and labor market needs, and offer implications for curriculum development, teacher training, and industry–education integration policies.

Keywords: vocational education, teachers' enterprise practice, industry–education integration, job–position matching, specialization alignment, skills match, employment quality

1. Introduction

Vocational education plays a crucial role in China's higher education system, aiming to cultivate highly skilled technical professionals who can meet the demands of rapidly evolving industries. As part of the national strategy and a driver of economic growth, it faces increasing challenges in aligning with the needs of emerging industries. In this context, industry–education integration has been identified as a key reform priority, emphasizing talent cultivation through school–enterprise collaboration to ensure education and industrial development progress in tandem (Ministry of Education, 2019; Xia & Luo, 2025).

Teachers' enterprise practice experience is recognized as an important factor in improving teaching quality and enhancing students' employability. Authentic industry experience enables teachers to bridge the gap between school and workplace, helping students adapt to job requirements and improve employment position matching (Tanggaard, 2007). However, the impact of practice duration remains underexplored, particularly in technology-intensive fields such as robotics and intelligent manufacturing. Observations suggest that employment guidance teachers with different lengths of enterprise experience may vary in their ability to enhance students' job matching, influencing both employment quality and long-term career development.

Accordingly, this study focuses on the relationship between the duration of employment guidance teachers' enterprise practice and students' employment position matching, addressing the following questions:

1) What is the relationship between the length of teachers' enterprise practice and students' job–field alignment?

2) Does practice duration lead to differences in job matching from both institutional and self-evaluation perspectives?

By examining these questions, the study seeks to provide empirical evidence for optimizing curriculum design, improving the alignment between students' skills and industry needs, and guiding teacher professional development in vocational education.

2. Literature Review

2.1 Background of Vocational Education and Industry–Education Integration

Against the backdrop of a rapidly changing global economy, vocational education is no longer perceived merely as the transmission of knowledge; rather, it has evolved into a bridge connecting theory and practice, academia and industry. In recent years, industry–education integration has been increasingly elevated on the policy agenda. This shift reflects not only the urgent demand for highly skilled talent but also a deeper reflection on how education should respond to evolving industrial needs (Xia & Luo, 2025). Xie and Xiao (2024) argue that teachers engaged in enterprise practice are not only discriminators of professional knowledge but also transmitters of industrial innovation. This process requires teachers not only to have a solid professional background but also to integrate the inherent skills, knowledge, and operational methods of corporate culture into their teaching practice. Within the model of industry colleges, schools and enterprises co-construct educational ecosystems, enabling both teachers and students to participate in a new learning environment. According to Zong (2025), industry colleges achieve deep integration between education and industry by aligning industrial development needs with educational curricula through school–enterprise cooperation. This collaborative mechanism, with enterprises as the primary driver and education as the foundation, fosters a synergistic approach to talent cultivation.

2.2 Impact of Teachers' Enterprise Practice on Students

The length of teachers' enterprise practice experience directly affects both the quality of their teaching and the employ ability of their students. Enterprise practice offers teachers opportunities to connect with industry, and sustained engagement enriches their professional expertise while enhancing their ability to impart practical skills in the classroom. Strengthening practice-based teaching significantly improves students' employ-ability, with reforms in teaching content, internship base development, and faculty training contributing meaningfully to this improvement (Wei, 2024).

The central question of this study is how the duration of enterprise practice influences teaching effectiveness. Can teachers' industry experience become a powerful engine for classroom instruction? Short-term enterprise practice can help teachers gain a basic understanding of corporate operations; however, time constraints often prevent them from acquiring in-depth knowledge of core technologies or emerging trends, which may limit the breadth and depth of their teaching. As a result, such teachers may be unable to fully deliver cutting-edge industry knowledge, thereby reducing the effectiveness of instruction and student learning outcomes (Siliņa-Jasjukeviča, 2025).

By contrast, long-term enterprise practice enables teachers to gain a comprehensive understanding of industry developments and absorb the essence of frontier technologies. This accumulated experience not only broadens their professional background but also allows them to integrate advanced industry knowledge and skills into their teaching, thus providing students with precise, practical, and industry-relevant career guidance (Xue, 2025).

2.3 Concept and Measurement of Employment Position Matching

In contemporary vocational education research, employment position matching has become a key indicator for assessing the alignment between educational quality and labor market needs. It is generally defined as the degree to which a graduate's job corresponds to their field of study, skills, and personal interests (Green & Henseke, 2016). The concept has been widely adopted to evaluate the connection between education and the labor market, with research showing that higher employment position matching improves graduates' job satisfaction and long-term career stability (Fazio, 2020).

Understanding the determinants and measurement methods of employment position matching not only deepens our grasp of educational outcomes but also provides empirical evidence for optimizing and reforming vocational education. One critical dimension is specialization alignment, which measures whether a graduate's job is related to their field of study, often assessed through surveys or employer evaluations (Green & Henseke, 2016). Another important dimension is skills matching, which examines the congruence between the skills required in a job and those possessed by the graduate (Fazio, 2020). In this study, both specialization alignment and skills matching are employed to explore the compatibility between educational outcomes and labor market demands.

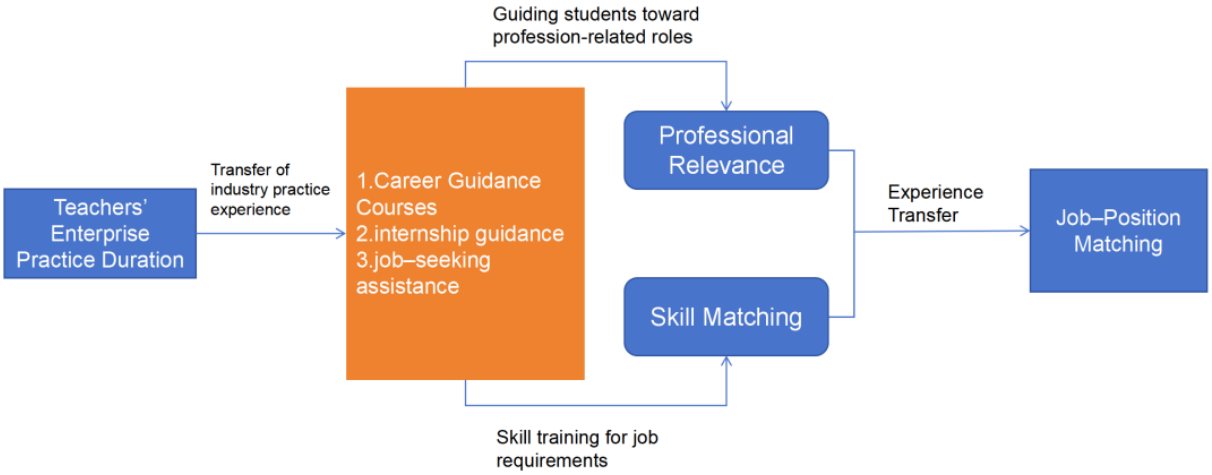

Figure 1. Pathway from Teachers' Industry Experience to Job–Position Matching

2.4 Research Gap and Contribution of This Study

Although existing research has addressed whether teachers participate in enterprise practice, relatively few studies have investigated how the duration of such practice specifically affects teaching quality and graduates' employment position matching. Li (2025) notes that most current studies emphasize the binary question of whether teachers engage in enterprise practice, while neglecting the differentiated effects of practice length. In high-technology fields such as robotics and intelligent manufacturing, empirical evidence is particularly lacking on how the length of teachers' enterprise practice influences graduates' employment position matching.

By conducting an in-depth empirical analysis, this study addresses this gap by examining the relationship between teachers' enterprise practice duration and graduates' employment position matching. The findings will offer fresh insights and empirical evidence for future research in vocational education, thereby contributing to both theory and practice in the field.

3. Research Methodology

This study adopts a quantitative research design to examine the correlation between the length of enterprise practice undertaken by teaching mentors and the employment position matching of their students, with particular focus on the influence of enterprise practice duration on job matching outcomes.

3.1 Research Subjects

Within the vocational education system, industry–college cooperative schools represent a key model for integrating industry and education, differing from traditional colleges in their operational and pedagogical approaches.

Taking the School of Robotics and Intelligent Manufacturing at Jiangxi University of Science and Technology as an illustrative case, students in their third year are assigned a dedicated employment guidance teacher who is responsible for supervising internships and practical training, as well as delivering employment guidance courses. These courses aim to enhance students' job-seeking capabilities and optimize their career pathways. The employment guidance teachers selected for this study all possessed more than two years of teaching experience, with substantial expertise in both instructional delivery and career development support, enabling them to provide continuous and systematic mentoring in both practical training and professional development.

To improve the statistical comparability of teacher enterprise practice duration groups and ensure balance in sample sizes, stratified screening and control procedures were applied to the original sample. Based on graduate data from 15 classes in the 2022–2024 cohorts, covering 15 employment guidance teachers, the initial distribution of enterprise practice duration was as follows: 0–2 years (inclusive) — 5 teachers; >2–4 years (inclusive) — 6 teachers; >4 years — 4 teachers. Due to this imbalance in group sizes, directly including all samples could reduce statistical validity and robustness. Therefore, an equal-group sampling strategy was employed, randomly selecting three teachers from each duration category to form three groups (totaling nine teachers). Selecting the same number of teachers from each category served two purposes: (1) to eliminate potential bias arising from unequal group sizes, which could distort variance estimates and affect the reliability of ANOVA results, and (2) to ensure that

each category contributed equally to the comparative analysis, thereby improving the precision of between-group comparisons.

All students supervised by the selected teachers were included in the research sample. Only students who had secured employment were retained for analysis; individuals who had withdrawn, pursued further study, or not entered employment were excluded. This resulted in a final valid sample of 271 students. Across classes, effective sample sizes ranged between 28 and 33 students, with minimal variation, ensuring robustness for subsequent statistical analysis.

Jiangxi University of Science and Technology was chosen as the research site because its School of Robotics and Intelligent Manufacturing serves as a model demonstration unit for industry–education integration, supported by strong industrial partnerships and educational resources. Its employment guidance system is influential and representative within the field, offering valuable empirical data for analysis. The small-class teaching format and dedicated employment guidance system ensure that students receive structured and ongoing career support during internships, which is crucial for assessing the impact of teachers' enterprise practice duration on student job matching. The study spans the graduating cohorts of 2022, 2023, and 2024, providing a broad sample base and reducing the limitations of relying on data from a single year.

3.2 Data Collection and Evaluation Methods

This study investigates the relationship between teachers' enterprise practice duration and students' employment position matching, particularly the potential influence of practice length on job–person fit. To ensure measurement reliability and accuracy, two dimensions were evaluated: specialization alignment and skills matching . Both institutional evaluations and student self-assessments were used in the analysis. All data collection complied with strict privacy and confidentiality requirements; employment data were anonymize, used solely for academic research, and approved by the Jiangxi University of Science and Technology ethics committee.

3.2.1 Evaluation Criteria and Data Collection

Specialization alignment measures the extent to which a student's major corresponds to their actual employment field, reflecting the congruence between educational background and job requirements. Skills matching evaluates the correspondence between a student's skill set and the skill requirements of their position. Institutional evaluations emphasize academic preparation and career readiness, while student self-assessments focus on perceived workplace performance and adaptation. Institutional scores were based on graduates' academic programs, coursework, and practical training, whereas self-assessments reflected graduates' own evaluations of their ability to apply professional knowledge and skills in their jobs, thus bridging the educational and workplace perspectives.

3.2.2 Institutional Evaluation Data Sources and Scoring Standards

Institutional evaluation data were obtained from the university's Graduate Employment Quality Assessment System, a long-standing internal management tool used to assess job matching based on the two core dimensions above. The scoring framework was developed in reference to the Catalogue of Vocational Education Majors (2021) and the National Occupational Classification of the People's Republic of China (2022 Edition), aligning with national policy and industry standards. Assessments were conducted by experienced university career guidance staff using a five-point scale (1 = completely mismatched, 5 = completely matched). This evaluation system has been implemented for several consecutive years, supporting annual employment quality reports and program development feedback, and is recognized for its content validity and structural stability, making it a reliable source for this study.

3.2.3 Student Self-Assessment Questionnaire Design and Theoretical Basis

To capture graduates' subjective perceptions, a Self-Assessment Questionnaire on Employment Position Matching for Higher Vocational Graduates was designed. The questionnaire assessed job matching from the graduates' own perspectives across the two dimensions. Specialization alignment items were informed by Robst's (2007) "Field of Study–Occupation Match" theory, while skills matching items were based on Allen and van der Velden's (2001) skill mismatch model, supplemented by Kristof-Brown's (2005) "Person–Job Fit" framework. Each dimension contained five core items, measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), producing continuous data for subsequent statistical analysis.

3.2.4 Data Processing and Mean Calculation

To ensure reliability and consistency, a standardized scoring system was applied. Institutional ratings were recorded as whole integers, while student self-assessment scores were retained to two decimal places to improve

resolution and statistical sensitivity. Cross-validation between institutional and self-assessment data enhanced measurement accuracy and interpret ability.

3.2.5 Data Analysis Methods

Descriptive statistics (means, standard deviations) were calculated for core variables. Pearson correlation analysis was used to test relationships among variables, and paired-sample t-tests compared differences between specialization alignment and skills matching. One-way ANOVA with Tukey post hoc tests compared mean differences among the three teacher practice-duration groups. Multiple regression models were then applied, controlling for variables such as academic performance and internship type, to assess the influence of practice duration on employment position matching.

4. Data Analysis

4.1 Sample Structure and Primary Variable Analysis

4.1.1 Distribution of Teacher Enterprise Practice Years by Student Sample

Table 1. Distribution of Student Samples by Teacher's Years of Enterprise Practice

Teacher's Years of Enterprise Practice		Frequency	percent
Valid	0-2years	88	32.5
	2-4years	93	34.3
	>4year	90	33.2
	Total	271	100.0

Table 1 presents the distribution of 271 student respondents according to the years of enterprise practice experience of their teachers. The data set includes all valid responses, excluding missing values. Teachers' enterprise practice experience was categorized into three groups: 0–2 years, 2–4 years, and 4 years or more.

As shown in Table 1, the 0–2 years group included 88 students (32.5%), the 2–4 years group included 93 students (34.3%), and the ≥4 years group comprised 90 students (33.2%). The proportions across the three groups were relatively balanced, ensuring sufficient sample sizes for comparative analysis.

This distribution provides a sound basis for subsequent statistical testing, reducing the potential for bias caused by uneven group sizes. The balanced distribution across different years of enterprise experience also indicates that the sample adequately reflects the population characteristics required for this study.

4.1.2 Descriptive Statistics of Core Variables

In this study, students' perceived job–field match was quantified by calculating the average score of their questionnaire responses, forming the variable "Average Student Self-Evaluation Score" to capture subjective assessments. The "School Evaluation Score" variable was used to reflect an objective assessment of job–field match. The descriptive statistics for these two variables are presented in Table 2.

Table 2. Descriptive statistics for school evaluation and student self-evaluation scores

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
School evaluation score	271	1	5	2.91	1.186
Average score of students' self-evaluation	271	1.1	5.0	3.063	.9948
Valid N (listwise)	271				

The results show that the mean School Evaluation Score was 2.91 (SD = 1.186), indicating an overall level slightly below neutral, with a relatively high degree of dispersion. This suggests considerable variation among students in terms of their job–field match as evaluated by their institutions. In contrast, the mean Average Student Self-Evaluation Score was 3.63 (SD = 0.995), noticeably higher than the school's evaluation, with a smaller standard deviation. This pattern indicates that students generally held a moderately positive view of their own job–field match, and that the variation in these self-perceptions was comparatively smaller across individuals.

Overall, the consistent gap between the mean self-evaluation and the school's assessment reveals that students' subjective perceptions of their job–field match tend to be more positive than the objective evaluations provided by

the institution. This discrepancy may reflect differences in evaluative standards between the two perspectives and underscores the need for subsequent analyses to examine both the correlation between, and the statistical significance of, these differences.

4.1.3 Correlation Analysis Between School Evaluation Scores and Students' Self-Evaluation Scores

Table 3. Pearson correlation matrix of core variables

		Schoolevaluationscore	P
School evaluation score	Pearson Correlation	1	.926**
	Sig. (2-tailed)		.000
	N	271	271
Average score of students' self-evaluation	Pearson Correlation	.926**	1
	Sig. (2-tailed)	.000	
	N	271	271

**. Correlation is significant at the 0.01 level (2-tailed).

To explore the relationship between the objective assessment of job–field match provided by the school and students' self-assessments, a Pearson correlation analysis was conducted between the School Evaluation Score and the Average Student Self-Evaluation Score. The results are presented in Table 3.

The analysis revealed a strong and statistically significant positive correlation between the two variables, with a correlation coefficient of 0.926, significant at the 0.01 level ($p < 0.001$). This finding indicates that students who rated their job–field match more highly in their self-assessments also tended to receive higher evaluations from the school, and that the strength of this association is substantial.

Overall, the results suggest a high degree of alignment between students' subjective perceptions and the school's objective evaluations regarding job–field match, demonstrating consistency in the overall trend across both perspectives.

4.2 Student Perceptions of Job–Field Match: Questionnaire Analysis

4.2.1 Distribution of Questionnaire Item Scores

Table 4. Descriptive Statistics of Questionnaire Items (Q1–Q10)

	N	Min	Max	Mean	Std. Deviation
Q1	271	1	5	2.93	1.224
Q2	271	1	5	3.05	1.224
Q3	271	1	5	2.96	1.264
Q4	271	1	5	3.14	1.196
Q5	271	1	5	3.13	1.220
Q6	271	1	5	2.96	1.235
Q7	271	1	5	3.05	1.228
Q8	271	1	5	3.07	1.212
Q9	271	1	5	3.32	1.163
Q10	271	1	5	3.03	1.197
Valid N (listwise)	271				

Regarding students' self-evaluations, the mean scores for the ten questionnaire items ranged from 2.93 to 3.32, indicating an overall moderately positive level of perceived job–field match. Among these, Q9 — "My school provided me with opportunities to apply professional skills in practical settings" — recorded the highest mean score (3.32, SD = 1.163), suggesting that most students recognize the positive contribution of practical experiences to job adaptation. Q5 — "Career guidance courses provided useful advice or resources related to employment during the job search or internship preparation stage" — had a mean score of 3.13, indicating that students generally hold a favorable view of the relevance and usefulness of professional employment support.

By contrast, several items scored closer to the midpoint, reflecting a more neutral stance. Q1 — "My current job is highly related to the major I studied" — had a mean of 2.93. Q3 — "My school's talent development focus

aligns with my company's goals and talent needs" — scored 2.96, while Q6 — "I often use the professional knowledge and skills learned at school in my work" — and Q7 — "The professional skills acquired at school have helped me successfully complete tasks in my current job and adapt to work processes" — recorded mean scores of 2.96 and 3.05, respectively. These results suggest that a portion of students remain cautious regarding the direct alignment between their academic training and current job requirements, the compatibility of institutional training goals with market needs, and the frequent application of classroom-acquired knowledge in the workplace.

4.2.2 Comparison of Mean Differences Between Major Relevance and Skill Match

Table 5. Paired-Samples t-Test between Field of Study Match and Skills Match

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	P1 - P2	-.0458	.5352	.0325	-.1098	.0183	-1.407	270	.160

To examine whether there is a significant difference in students' self-evaluated scores for major relevance (P1) and skill match (P2), a paired-samples t-test was conducted. The results indicate that the mean score for P1 was slightly lower than that for P2 (mean difference = -0.0458), with a standard deviation of 0.5352 and a 95% confidence interval for the difference ranging from -0.1098 to 0.0183. The t-value was -1.407, which was not statistically significant at the 0.05 level ($p = 0.160 > 0.05$).

These findings suggest that students' perceptions of major relevance and skill match in job–field compatibility do not differ significantly. In other words, they tend to evaluate the relevance of their major and the alignment of their skills with job requirements in a relatively consistent manner.

4.2.3 Correlation Between Students' Self-Evaluated Major Relevance, Skill Match, and School Evaluation Score

Table 6. Pearson Correlation between Field of Study Match, Skills Match, and Overall Match

		School evaluation score	P1	P2
School evaluation score	Pearson Correlation	1	.885**	.903**
	Sig. (2-tailed)		.000	.000
	N	271	271	271
P1	Pearson Correlation	.885**	1	.865**
	Sig. (2-tailed)	.000		.000
	N	271	271	271
P2	Pearson Correlation	.903**	.865**	1
	Sig. (2-tailed)	.000	.000	
	N	271	271	271

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation analysis results (Table 6) indicate a significant positive relationship between major relevance and skill match ($r = 0.865$, $p < 0.001$). Moreover, both dimensions demonstrate high correlations with the School Evaluation Score, with correlation coefficients of 0.885 and 0.903, respectively (both $p < 0.001$). These findings suggest that, in students' self-assessments, perceived alignment between their major and current job, as well as between their skills and job requirements, are not only strongly interrelated but also closely aligned with the institution's objective evaluation of job–field match. This implies that either major relevance or skill match can, to a considerable extent, serve as a valid indicator of the overall level of job–field compatibility.

4.3 Relationship Between Teachers' Industry Experience and Job–Position Match

4.3.1 Analysis of Teachers' Industry Experience and School-Based Evaluation

An analysis of the duration of teachers' industry practice and the objective ratings of students' job–position match reveals that teachers' industry experience exerts a significant influence on students' job–position alignment.

Table 7. One-Way ANOVA Results for Differences in Institutional Evaluation Scores across Teacher Groups

School evaluation score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.373	2	14.686	11.230	.000
Within Groups	350.502	268	1.308		
Total	379.875	270			

According to the ANOVA results presented in Table 7, the length of industry experience significantly affects students' school-based evaluation scores for job–position match ($F = 11.230$, $p = 0.000$). This indicates that variations in teachers' length of industry experience lead to statistically significant differences in students' performance as evaluated by the school. However, post-hoc comparisons (Tukey HSD) in Table 8 show that the difference between the 2–4 years group and the over 4 years group does not reach statistical significance ($p = 0.081$). This may suggest that within the range from moderate industry experience (2–4 years) to extensive experience (over 4 years), the improvement in students' school evaluation scores is relatively small, implying a diminishing marginal effect of experience within this interval.

Table 8. Post Hoc Pairwise Comparison Results for Institutional Evaluation Scores across Teacher Groups

Dependent Variable: School evaluation score							
						95% Confidence Interval	
	(I) groupcode	(J) groupcode	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Tukey HSD	0-2years	2-4years	-.447*	.170	.025	-.85	-.05
		>4years	-.811*	.171	.000	-1.22	-.41
	2-4years	0-2years	.447*	.170	.025	.05	.85
		>4years	-.365	.169	.081	-.76	.03
	>4years	0-2years	.811*	.171	.000	.41	1.22
		2-4years	.365	.169	.081	-.03	.76

*. The mean difference is significant at the 0.05 level.

Specifically, students taught by teachers with 0–2 years of industry practice scored significantly lower than those taught by teachers with 2–4 years or over 4 years of experience. This finding indicates that teachers' engagement in industry practice may directly enhance students' ability to match workplace requirements, particularly when teachers possess substantial professional backgrounds that enable them to better guide students in adapting to job demands.

In conclusion, teachers' industry experience appears to have a positive impact on students' job–position match as assessed by the school. Students taught by teachers with greater industry exposure tend to achieve higher evaluation scores, and this positive effect becomes more evident as teachers' professional experience increases.

4.3.2 Teachers' Industry Experience and Students' Self-Evaluation

To examine the influence of teachers' industry experience on students' self-assessment of job–position match, a one-way analysis of variance (One-Way ANOVA) was conducted. The results (Table 9) indicate that the mean self-evaluation scores of students taught by teachers with different lengths of industry practice differ significantly ($F = 4.286$, $p = 0.015$). This finding suggests that teachers' accumulated work experience in industry may be related to how students perceive their own job–position match.

Table 9. One-Way ANOVA of Students' Self-Evaluation Scores by Teachers'Years of Enterprise Practice

Average score of students' self-evaluation					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.281	2	4.141	4.286	.015
Within Groups	258.892	268	.966		
Total	267.174	270			

In terms of mean scores, students in the 0–2 years group reported the lowest self-assessment, followed by those in the 2–4 years group, with the highest scores observed in the over 4 years group. Overall, the results reveal an upward trend in students' self-perceived job–position match as teachers' industry experience increases. This pattern implies that teachers with more substantial industry backgrounds may be more effective in helping students understand job requirements and enhance their sense of personal fit during the teaching and mentoring process.

Table 10. Tukey HSD Test for Students' Self-Evaluation Scores by Teachers' Years of Enterprise Practice

Dependent Variable: P							
	(I) groupcode	(J) groupcode	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	0-2years	2-4years	-.1665	.1462	.491	-.511	.178
		>4years	-.4275*	.1473	.011	-.775	-.080
	2-4years	0-2years	.1665	.1462	.491	-.178	.511
		>4years	-.2610	.1453	.173	-.604	.082
	>4years	0-2years	.4275*	.1473	.011	.080	.775
		2-4years	.2610	.1453	.173	-.082	.604

*. The mean difference is significant at the 0.05 level.

Further post-hoc analysis (Tukey HSD, see Table 10) shows that the difference between the 0–2 years group and the over 4 years group is statistically significant ($p = 0.012$), whereas the differences between the 0–2 years and 2–4 years groups ($p = 0.178$), and between the 2–4 years and over 4 years groups ($p = 0.173$), are not statistically significant. This indicates that more pronounced differences in students' self-evaluations occur when there is a substantial gap in teachers' industry experience, while differences between adjacent experience groups are less distinct.

In summary, teachers' industry experience is positively associated with students' subjective perception of job–position match. This positive effect becomes more apparent when teachers have longer industry backgrounds, which may be closely linked to their ability to integrate richer professional insights into teaching and career guidance.

4.3.3 Interaction Analysis of Industry Practice Duration and Job–Position Match

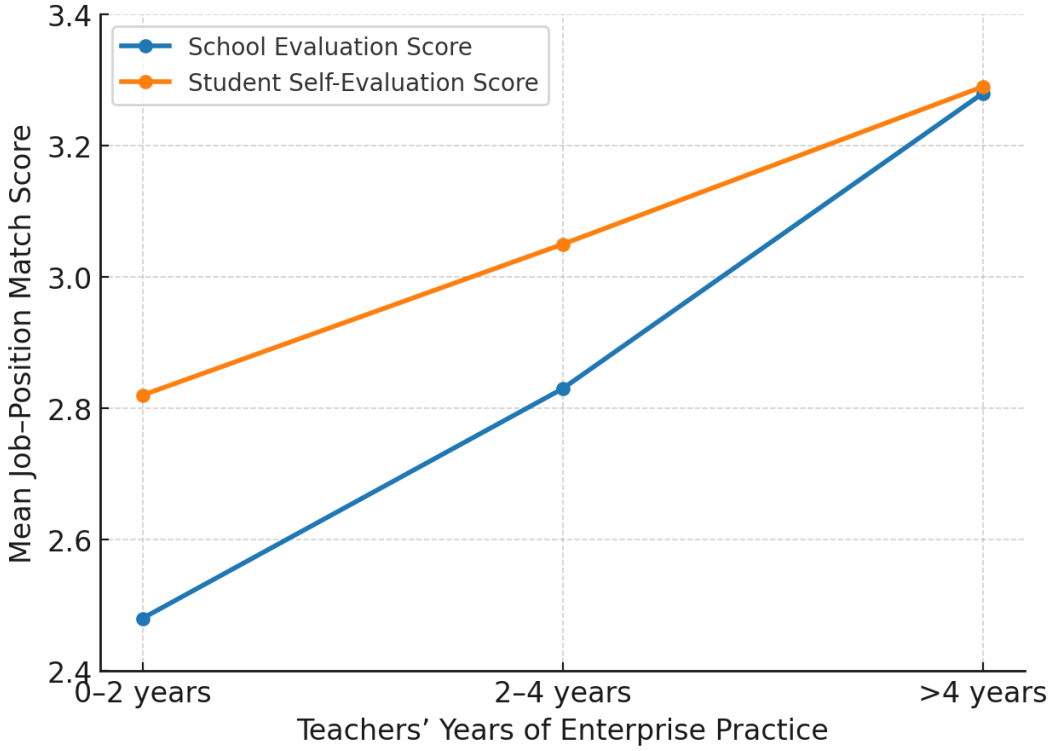

Figure 2. Comparison of School and Student Evaluation Scores by Teachers' Years of Enterprise Practice

To further compare the impact of teachers' industry experience on job–position match from both objective and subjective perspectives, this study grouped school-based evaluation scores (objective) and students' self-assessment scores (subjective) according to teachers' length of industry practice, and plotted the corresponding trend graphs (see Figures 2 and 3).

Both figures reveal an upward trend in job–position match scores as teachers' years of industry practice increase. However, the magnitude of change differs between the two measures: the differences between groups are more pronounced in school-based evaluations, whereas the variation in students' self-assessments is relatively moderate. This suggests that the positive influence of teachers' industry experience is more salient in objective evaluations, while subjective perceptions may be shaped by additional factors such as personal expectations and job-related experiences, resulting in greater stability.

Overall, the trends in both evaluation methods point in the same direction, supporting the conclusion that longer durations of teachers' industry practice contribute to improving job–position match.

5. Discussion

5.1 Analysis of the Phenomenon that Students' Self-Evaluations Tend to be Higher than University Evaluations

Across all practice-duration groups, students rated their job-position matching more positively than did university evaluators. This difference was not only consistent but also statistically significant, indicating that the divergence was systematic rather than incidental. Several factors may contribute to this phenomenon.

First, differences in evaluation criteria appear to play a role. Universities tend to apply multi-dimensional and more stringent assessment frameworks, incorporating indicators beyond immediate job-role alignment. These include the congruence between graduates' skills and evolving industry requirements, feedback from employers, and comparative benchmarks across sectors or peer institutions. Students, by contrast, are more likely to base their assessments on early-stage job satisfaction, the perceived relevance of their first job to their academic background, and self-perceived competence in fulfilling job duties.

Second, information asymmetry is a plausible explanation. Students' evaluations are inherently subjective, informed mainly by their own initial employment experiences, which may be limited in scope. Universities, however, often have access to a wider range of information sources, such as employer surveys, labour market data, and longitudinal tracking of graduates' career trajectories. This broader informational base enables more critical and comprehensive assessments.

Third, perceptual and psychological factors may lead to inflated self-assessments. Graduates in the early stages of their careers may adopt an optimism bias—both as a form of self-affirmation of their academic efforts and as a result of limited exposure to industry standards. Without systematic comparisons to external benchmarks, they may overestimate the degree to which their employment aligns with their training.

5.2 Positive Association between Teachers' Industry Practice Duration and Students' Job-Position Matching

The results indicate a generally positive relationship between teachers' length of industry practice and the job-position matching of their students. This finding is consistent with the premise that teachers who possess substantial professional experience can provide more industry-relevant knowledge, up-to-date skill requirements, and authentic workplace scenarios, all of which enhance students' employability.

The group whose teachers had four or more years of industry practice achieved significantly higher job-matching scores in university evaluations than those taught by teachers with only 0–2 years of such experience. This suggests that prolonged engagement in industry allows teachers to keep pace with evolving technologies, practices, and competency frameworks. Moreover, extended industry exposure likely enhances teachers' ability to integrate practical examples and case studies into their teaching, thereby making classroom instruction more directly relevant to the labour market.

From a curricular perspective, such experience may also facilitate enhanced curriculum design, aligning course content more closely with real-world job requirements and thus improving graduates' adaptability to specific roles. These outcomes underscore the value of structured opportunities for teachers to engage in sustained industry practice as part of professional development.

5.3 Divergence in Evaluations on the Impact of Teachers' Industry Practice Duration on Job-Position Matching

While a positive association between teachers' industry practice duration and students' job-position matching was evident in university evaluations, this relationship did not reach statistical significance in students' self-assessments. In other words, although both groups showed a trend towards higher scores with increased teacher industry experience, only universities perceived the relationship as sufficiently strong to be statistically meaningful.

Several explanations may account for this divergence. One possible factor is the lag in experiential translation: the benefits of teachers' industry experience may manifest more clearly in the medium to long term, as students encounter more complex workplace demands. At the point of early employment, students may not yet fully recognise the relevance of certain knowledge or skills acquired during their studies.

Another consideration is industry-field alignment. If the sectors in which teachers gained their practice differ from the industries where graduates find employment, students may perceive limited direct applicability, even if universities assess the transferability of skills more broadly.

Finally, the divergence may reflect differences in evaluative perspective. Universities assess the relationship from a systems-level viewpoint, considering aggregated employer feedback, sector-wide trends, and long-term employability indicators, while students focus on the immediate alignment of their first job with their expectations and academic preparation.

This discrepancy highlights the need for more effective communication between universities and graduates regarding the intended learning outcomes of industry-informed teaching, as well as for further integration of industry engagement into both curriculum and student career development services.

5.4 Practical Implications and Future Research Directions

The findings have several implications for higher education policy and practice. First, curriculum design should make systematic use of teachers' industry expertise, ensuring that course content reflects current industry demands while also equipping students with transferable skills adaptable to evolving labour markets. Second, teacher professional development programs should prioritise sustained, structured industry engagement, not merely short-term placements, to maximise the depth and applicability of the knowledge gained. Third, university–industry collaboration should be institutionalised, facilitating regular feedback from employers to both faculty and students, thereby reducing information asymmetries in evaluating job-position matching.

For future research, longitudinal studies could track whether the divergence in evaluation between students and universities persists or converges over time as graduates advance in their careers. Comparative studies across disciplines and institutional types could also shed light on whether these patterns are context-specific or generalisable. Moreover, mixed-method approaches incorporating qualitative interviews could deepen understanding of how graduates interpret and value their teachers' industry experience in relation to their own career outcomes.

6. Conclusion

This study set out to examine the relationship between university teachers' length of enterprise practice and the employment position matching of their students, with particular attention to differences across evaluation perspectives. The findings indicate an overall positive association between longer durations of enterprise practice and higher employment matching, though the strength and statistical significance of this relationship vary depending on the rater.

From the institutional evaluation perspective, students guided by teachers with four or more years of enterprise practice exhibited significantly higher position matching scores compared to those taught by teachers with only zero to two years of practice. This difference was statistically significant, suggesting that extended enterprise experience enables teachers to acquire richer industry knowledge, up-to-date occupational skill requirements, and authentic workplace cases. These elements can be integrated into course content and teaching approaches that are more closely aligned with industry needs, thereby improving students' job-fit.

However, in the student self-assessments, although the general trend was still positive, the differences between practice-duration groups were not statistically significant. This divergence points to possible variations in evaluation criteria and reference frames: students may base their judgments primarily on personal job-search and onboarding experiences, while institutions assess alignment from the standpoint of curriculum content, teaching quality, and relevance to market demands. Moreover, the translation of teachers' industry experience into tangible student competencies requires deliberate pedagogical mediation—through course design, case-based learning, and practical training arrangements—a process that may entail a time lag before measurable effects emerge. In addition, discrepancies between the sectors of teachers' practice experience and students' actual employment industries may attenuate the direct influence of enterprise practice on job matching.

These findings contribute empirical evidence to the multidimensional assessment of vocational education quality, underlining the value of incorporating multiple evaluators and criteria to counteract the potential biases arising from information asymmetry and perceptual differences. Practically, they suggest that policies aiming to strengthen teacher–industry linkages should be complemented by efforts to ensure curricular relevance and

sectoral alignment. For future research, longitudinal tracking and cross-sector comparisons could further elucidate the long-term effects of teachers' enterprise experience on graduates' career trajectories, while qualitative inquiry could unpack the mechanisms through which industry experience is transformed into measurable educational outcomes.

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Appendices

Student Job Matching Self-Assessment Questionnaire

Dear Graduate,

Thank you for taking the time to complete this survey. The purpose of this study is to explore the relationship between career guidance teachers' industry practice experience and the job matching outcomes of vocational college graduates. Your responses will provide valuable insights for improving teaching practices and employment support services.

This questionnaire is anonymous, and all information collected will be kept strictly confidential and used solely for academic research purposes. Please answer based on your actual experience. The questionnaire should take approximately **5–10 minutes** to complete.

Section 1: Background Information

Item	Response Options
Student ID or Code	
Class	
Graduation Year	□ 2022 □ 2023 □ 2024
Current Job Title	

Section 2: Job Matching Self-Assessment

Please rate each of the following statements according to your current employment experience.

Use the 5-point Likert scale below:

1 – Strongly Disagree

2 – Disagree

3 – Neutral

4 – Agree

5 – Strongly Agree

Field of Study Match		
NO.	**Statement**	**Score**
1	My current job is highly related to the major I studied.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
2	My academic background was a basic or essential requirement for obtaining my current job.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
3	My school's talent development focus aligns with my company's goals and talent needs.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
4	The work I do now generally falls within the professional field of my major.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
5	Career guidance courses provided useful advice or resources related to employment during the job search or internship preparation stage.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
Skills Match		
NO.	**Statement**	**Score**
6	I often use the professional knowledge and skills learned at school in my work.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
7	The professional skills acquired at school have helped me	□1 – Strongly Disagree □2 – Disagree

	successfully complete tasks in my current job and adapt to work processes.	□3 – Neutral □4 – Agree □5 – Strongly Agree
8	The technical knowledge from my major is highly relevant to the technical requirements of my current job.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
9	My school provided me with opportunities to apply professional skills in practical settings.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree
10	The professional tools and software I learned at school are still being used in my current work.	□1 – Strongly Disagree □2 – Disagree □3 – Neutral □4 – Agree □5 – Strongly Agree

Section 3: Scoring Guidelines

Field of Study Match Score = Average of items 1–5

Skills Match Score = Average of items 6–10

Overall Job Matching Score = Average of the two dimensions above

Thank you for completing this questionnaire. Your kind support is greatly appreciated!