

Practical Training, Industry Partnerships, and Graduate Competency: Evidence from TVET Hospitality Programs in Accra, Ghana

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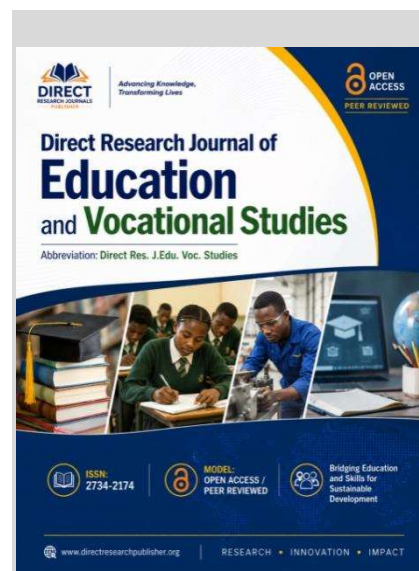
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ABSTRACT

Despite the skills mismatch and perceived employability of graduates of technical and vocational education and training (TVET) programs in Ghana's hospitality industry, little empirical research has examined how practical skills training and collaboration between TVET institutions and industry stakeholders shape TVET graduate competency from an employer perspective in the Ghanaian hospitality industry. This study seeks to fill that gap in knowledge. A mixed-methods research design was employed to investigate the effect of practical training and industry collaboration on the employability of TVET graduates in the hospitality and tourism service sector of the Greater Accra Region of Ghana, focusing on selected three- four, and five-star hotels. Quantitative data was collected through a survey of 264 hotel managers and supervisors. Interviews were also conducted with hospitality stakeholders. Descriptive statistics and multiple linear regression were used to analyze quantitative data. Qualitative data was analyzed thematically. Practical training was a statistically important predictor of graduate job competency ($\beta=0.312$, $B=0.154$, $t=5.318$, $p<0.001$). Quality of partnerships with industry was also a meaningful predictor of graduate competency ($\beta=0.148$, $B=0.068$, $t=2.326$, $p=0.021$). The two variables explained 51.5% of the variance in graduates' competency ($R^2=0.515$, Adjusted $R^2=0.505$, $F(2,261)=138.60$, $p<0.001$). Qualitative results corroborate that partnerships provide exposure to workplaces and employment. Partnerships are chiefly internship-based, with little active engagement in curriculum, mentoring and feedback. Further, competency-based TVET requires systematic practical learning and effective institutionalized industry partnerships to support curriculum development, workplace-based assessment of students, mentoring and feedback for improving graduates' workplace preparedness and performance.

Keywords: Technical and Vocational Education and Training, Practical Training, Industry Partners, Competence, Hospitality Workforce, Ghana



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INTRODUCTION

The hospitality industry is one of the most service-oriented industries. Employees' service performance is determined by the mix of the employees' professional skills, soft skills, digital skills and adaptability. Unlike firms that operate with strict protocols, hospitality firms seek employees who will interact with customers, troubleshoot service delivery problems, and exercise judgment in uncertain situations. Hospitality programs need to deliver graduates with the occupational knowledge and skills to deliver services and the competencies and skills (behavioral competence) necessary to deliver those services in a professional and effective manner. For instance, employers prioritize graduates with integrated technical, social and professional competencies over those with only task-based skills (Amrollahi et al. , 2025; Puente-Martínez & Bueno-Villaverde, 2026). TVET plays an important role in providing workers with practical and theoretical skills. It contrasts with academic education by focusing on competency-based education, exposure to workplaces and preparedness for work. Practical training, work-integrated learning and industrial attachment provide students with opportunities to transfer classroom-based knowledge into the workplace and offers opportunities to gain technical confidence and skills, workplace behaviors and problem-solving skills. Research into experiential learning has shown that students develop workplace competence when participating in practical training, reflecting on their experience and applying skills and knowledge learnt to new situations (Billett, 2011).

Further hospitality education research has shown that work-integrated learning is positively related to hospitality students' professional skills, career readiness, and adaptability to the workplace (Boonkaew et al. , 2025; Khuadthong et al. , 2025; Suyitno et al. , 2025). The effectiveness of workplace learning depends on the amount of time spent in the workplace, supervision and institutional support. Workplace based learning is effective in improving technical and non-technical skills, although there is evidence that a lack of connection between education institutions and employers impedes effectiveness. However, other research has found that poor quality mentoring, communication and placement design can limit the benefits that students receive from workplace learning opportunities (Chen et al. , 2025; Folsom & Awuah, 2026). Another means of keeping TVET relevant and effective is through collaboration between industry and TVET providers; thus helping employers to have a say in curriculum development, identify the requisite skills, provide workplace learning opportunities and feedback on the performance of graduates. These

partnerships assist in aligning academic curricula with the needs of the labour market by enabling graduates to acquire workplace-related skills and competencies (Md Yusof et al. , 2025). Much of TVET-industry partnership activity is also in the area of companies offering internships to TVET schools. As a result, institutional-level partnerships, which are critical to curriculum design, competency assessment, mentoring and continuous feedback, are not common and not fully used in producing graduates with improved capability. Based on experiential learning theory and industry collaboration perspectives, these theories provide the framework for understanding the experiential aspects and the institutional environment that promote graduate outcomes. Based on experiential learning theory, the professional competence of students will develop through the transformation of experience into knowledge through the experience-reflection-process knowledge cycle. TVET education often includes practical training and workplace-based learning.

Such work-based learning makes it possible for the student to apply theoretical learning to the context of the workplace, and develop the technical skills and workplace behaviors to carry out occupational tasks. Practical training is therefore an important mechanism for workplace competence. Moreover, the study also adopts the industry collaboration perspectives. More specifically, social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005) is employed to explain the relationships between TVET institutions and hospitality organizations as it posits that continual relationships are maintained if the parties within them exchange valuable resources. In a TVET-industry partnership, TVET institutions provide access to future skilled workers and education knowledge, whilst industry partners provide workplace knowledge, mentoring and practical exposure and evaluation of industry needs. The partnership's success will therefore depend on the quality and quantity of reciprocal engagement between TVET institutions and their partners in industry. The resource-based view (Barney, 1991) provides a theoretical rationale for focusing attention on industry partnership. The theory argues that access to valuable resources and knowledge can provide a source of sustained competitive advantage. Through industry partnership, TVET institutions have access to knowledge of current workplace practices, technological developments, and expertise that may not be available within the educational institution. Thus, it was believed that such partnerships would improve the relevance of competency-based training and employability. Built on this framework, the study argues that the contribution of practical training to competency is through experiential

skill development, whereas industry collaboration improves competency by providing workplace capabilities, knowledge exchange and institutional support for the use of skills at work. The success of any industry collaboration depends less on its existence, and more on its structure and strength of commitment. Concerns over the employability and skills mismatch of TVET graduates in Ghana still exist. Graduates of TVET institutions are still believed to have the wrong skills or competencies for work in the service sector (hospitality), notwithstanding Ghana's attempt to improve the competency-based TVET education. Although there are studies on employability, skills gaps, and industry-academia collaboration, there is scarce empirical research on how hospitality employers assess the competency of TVET graduates and how the practical training and industry collaboration impact the competency of TVET graduates in the hospitality industry. Previous studies examined the separate effects of practice-oriented training or employer interaction with the curricula on graduate competency. Others studied employability from the students' viewpoint; that is, these studies relied on students' self-reports of employability, rather than on evidence of employability as assessed by employers considering students' performance at work. Third, most of the existing literature has been taken from developed countries and Asian countries, whose TVET systems, institutional framework and industry relations, are quite different from those of Ghana. This study therefore sought to inform current literature on the influence of industrial training and industry collaboration on the employability of TVET graduates in the job market, particularly in three-star to five-star hotels in the Greater Accra Region of Ghana. The study adopts the employer point of view by collecting data from the perspectives of hotel managers and supervisors who are involved in the recruitment, appraisal and supervision of TVET graduates. Theoretically, the study presents an experiential learning perspective and an industry collaboration perspective for workplace experience and institutional collaboration as complementary mechanisms for developing workplace capability. Experiential learning theory explains how experiential learning can be turned into workplace capability. Industry collaboration perspectives suggest that collaboration between TVET institutions and employers is a pathway for accessing workplace knowledge, resources and networks. Empirically, the research extends previous TVET research in Ghana by combining the concepts of the practice of training and industry collaboration into a single framework and examines their joint effect on graduate competency from the hospitality employers' perspective. The findings provide information to enable TVET providers, hospitality employers, and policymakers to develop more industry-responsive competency-based TVET systems. The study hypothesized that; (1) H01: Practical training has a

positive and statistically significant effect on the job competency of TVET graduates employed in three- to five-star hotels in Ghana and (2) H02: Industry partnerships have a positive and statistically significant effect on the job competency of TVET graduates employed in three- to five-star hotels in Ghana.

METHODOLOGY

Research Design

A mixed-methods research design was employed because it was considered an appropriate method to investigate the effect of practical training and industry linkage strategy on the job competency of TVET graduates who worked in the hospitality industry in three- to five-star hotels in the Greater Accra Region of Ghana by analyzing both the correlation between the study variables and the experiences contextual to the hospitality sector of competence acquisition. Creswell and Creswell (2023) suggest that mixed-methods research enables the combination of quantitative research and qualitative research to provide better perspectives on complex educational and organizational phenomena. To this end, a cross-sectional survey was employed to ascertain the contribution of practical training and industry-practice collaboration to the employability of TVET graduates. Data was obtained from hospitality workers and hospitality management professionals (including hotel managers, human resource managers, heads of departments, senior supervisors) responsible for recruiting, training and/or assessing student performance. Quantitative data were analyzed using descriptive statistics and multiple linear regression to determine the strength, direction, and predictive contribution of independent variables in graduate competency. Qualitative data were collected through semi-structured interviews of purposively selected hospitality stakeholders to explore their perceptions and perspectives on the TVET-industry partnership in terms of workplace exposure, workplace supervision, curriculum input and employer expectations. The data from the interviews were analyzed thematically for explanations and insights on the quantitative data. In this study, triangulation of both strands offered stronger foundations for validation and interpretation by combining objective relationships with subjective account. This design was justified since graduate competency is a measurable outcome, but is a workplace phenomenon arising from practical experience, industry need, institutional links between higher education and work, and organizational practices.

Study Population and Sampling

Participants were human resource managers, department

managers, operations managers, front office managers, training managers and other managerial staff responsible for hiring, supervising, assessing staff performance, developing staff, and liaising with TVET institutions in 3-, 4- and 5-star hotels registered by the Ghana Tourism Authority in the Greater Accra Region (GAR) of Ghana. The reason for requesting these respondents to complete the survey is that they have the expert knowledge and experience of how TVET graduates performed, their job readiness, and their level of competency at work. Managers directly contribute to recruiting graduates, managing their performance, and supervising and identifying skills gaps among their employees, thus making them credible respondents on the topic of graduate competency. Purposive sampling was used in the study where specific respondents were sought who could give their knowledge and experience in the employment of TVET graduates and the operation of hotels. Purposive sampling is a sampling method where the researcher selects individuals who are knowledgeable and can provide information about the study topic (Etikan et al. , 2016). Furthermore, not every hotel employee was fully aware of recruitment, training collaboration, and performance evaluation of the graduates, so managerial-level respondents were chosen for more informative and valid results. In total, 22 registered hotels which consisted of 12 number of three-star hotels, six number of four-star hotels and four number of five-star hotels operating within the Greater Accra Region were selected for the study. A total of 300 valid questionnaires were sent out to the identified hotel managers who were eligible for the study. Of these, 264 questionnaires were returned, achieving an 88.0% response rate. Response rate was high enough for organizational survey research, because it provided a critical mass of data which could be statistically analyzed, to reduce the disadvantages of non-response bias. Choosing respondents directly involved in the management of hotels/ lodging and supervision of TVET graduates also contributed to the high response rate.

Measurement of Variables

The three constructs in this study were practical training and industry collaboration as the independent variables and job competency as the dependent variable. To ensure content validity, the measurement scales and items were adopted from the previous studies on TVET education, work-integrated learning, hospitality training, and employability. To assess opportunities for practical learning, seven statements based on Okolie et al. (2020), and Unesco-Unevoc (2021) were designed. These included statements on workplace exposure, practical skills development, equipment operation, SOP adherence, safe equipment and tool use, problem-solving, and task independence. Industry collaboration in the hospitality sector is developed through working experience, and was

measured with six items based on previous studies of Naidoo & Meadows, (2026). Items focused on curriculum development, internships, industrial attachment, mentoring and employer engagement in collaborations focused on making the skills set of the workforce relevant to the labour market. Eight items from Spencer and Spencer (1993), and Huang et al. (2021) measured job competency: technical skills, communication, customer service, professionalism, teamwork, adaptability, problem-solving, and technology application. All constructs were measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Reliability and Validity Assessment

First, the measurement instrument had to be checked for reliability and validity, to ensure that the constructs in question had been measured accurately.

Construct Validity

A Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used to determine if the data were suitable for factor analysis. This test analyses the adequacy of the sample size and the correlations between variables in relation to factor analysis. A KMO score above .70 indicates that the data are appropriate for factor analysis. Further, the KMO measures of sampling adequacy for the practical laboratory training (0.721) and collaborative engagements with industry (0.751) were greater than the recommended acceptable value of 0.70. The Bartlett's Test of Sphericity was also statistically significant ($p < 0.001$), confirming that the correlation matrix was not an identity matrix.

Reliability Testing

The analyzed and assessed internal consistency, or reliability, of items measuring the same internal construct was assessed using Cronbach's alpha coefficient, which is commonly accepted as acceptable for values above 0.70 in social science studies. The reliability of practical training was 0.706, the reliability of the industrial collaboration was 0.772 and the overall reliability coefficient of the measurement items of this study was 0.725. Additionally, because a single questionnaire was administered at the same time to all respondents, common method bias may have been involved. Harman's single-factor test was used to determine if a single factor accounts for the majority of the variance among the variables. In addition, the first unrotated factor accounted for less than 50% of the total variance, suggesting that common method variance was unlikely to be a serious threat to the validity of the research findings.

The questionnaire was administered anonymously and evaluation apprehension was minimized.

Data Analysis

The data were analyzed using IBM SPSS Statistics Version 27. SPSS was used due to the large number of statistical procedures it has for analyzing survey data, examining correlation between variables and performing regression analysis. Frequencies, percentages, means and standard deviations were calculated for a summary of respondent demographic characteristics, practical training, collaboration with industry, and job competence levels among TVET graduates. Diagnostic tests were performed before hypothesis testing to check whether the assumptions for multiple linear regression were met. Linearity tests were performed to check whether the relationship between the predictor variables and the dependent variable was linear. The residuals' normality was evaluated with normality tests, homoscedasticity was assessed through the variance of the residuals against the predicted values, and the predictor variables' multicollinearity was assessed with the Variance Inflation Factor (VIF). The assumptions of multiple linear regression analysis have been sufficiently met, as the variance Inflation Factor (VIF) values are all less than 5, thus indicating that the multicollinearity among the predictor variables is not serious. The multiple linear regression model was used in the study to assess the extent to which practical training and quality of industry partnership predict the job competency of TVET graduates. Thus, job competency of TVET graduates was used as a dependent (response) variable and practical training and quality of industry partnership as independent (predictor) variables of the model. A multiple linear regression was deemed the most appropriate analysis, as it would allow for participants' unique contributions of two predictor variables to graduate job competency to be determined, whilst controlling for the other predictor variable. Statistical significance was set at $p < 0.05$.

RESULTS AND DISCUSSION

Demographic Characteristics of Respondents

Table 1 shows the demographic characteristics of the 264 respondents who participated in the study on practical training and industry partnerships as drivers of job competency among TVET graduates in three to five-star hotels in Ghana. The demographic characteristics of the respondents reflect their institutional and vocational background as well as the environment within which the competencies of TVET graduates were studied. The data indicated that most of the respondents came from three-star hotels (54.5%), followed by four-star hotels (27.3%) and five-star hotels (18.2%). This suggested that the

Table 1: Demographic Characteristics

Characteristics	n = 264	Percent
Hotel Star-Rating		
3-star	144	54.5
4-star	72	27.3
5-star	48	18.2
Gender		
Male	76	28.8
Female	188	71.2
Age of Respondent		
25-30	105	39.8
31-35	35	13.3
36-40	106	40.2
Above 40	18	6.8
Department		
Front Office	31	11.7
Food and Beverage	42	15.9
Housekeeping	61	23.1
Events & Conference	91	34.5
Management	39	14.8
Duration the Hotel Has Been Eco-rated		
Less than 1 year	11	4.2
1-3 years	115	43.6
4-6 years	97	36.7
7-10 years	32	12.1
Above 10 years	9	3.4
Number of Rooms		
Fewer than 151	70	26.5
151 - 300	140	53.0
301 - 500	24	9.1
Over 500	30	11.4
Occupancy Rates		
Below 60%	52	19.7
61% - 75%	118	44.7
76% - 85%	63	23.9
Above 85%	31	11.7

Source: Survey Data (2025)

survey captured the opinion of respondents predominantly from mid-range hotels, which constitute an important portion of Ghana's hotel sector. However, inclusion of higher-rated hotels ensured that hotels with more mature people management structures and competency expectations were represented. Hotels of differing service levels may have varying expectations of staff competencies, workplace readiness, and work-related competence requirements. Current TVET evidence for Ghana remains indicative of a skills mismatch, requiring better alignment between TVET training and employer skills expectations. With regard to gender, females (71.2%) outnumbered males (28.8%). This could be explained by the trend of the increasing number of women in the hospitality industry, particularly in the service departments of housekeeping, food and beverage, and guest relations. The age distribution revealed that, as members of the economically active population, 40.2% of the respondents were aged between 36 and 40 years whilst 39.8% were aged between 25 and 30 years. Hence, they had adequate work experience to have an informed opinion on the workplace performance of the TVET graduates. Events and Conference (34.5%) and

Table 2: Response Summary for Quality of Partnerships

Descriptors	Mean	CV
Our organization is involved in collaborative program planning and curriculum development with partner institutions.	3.94	40.8
The level of engagement and communication from our academic partners is consistent, proactive, and mutually beneficial.	3.61	27.6
Industry professionals visited my school to give lectures or seminars.	3.95	37.7
Hotel partners contributed to curriculum content or program planning.	3.63	37.9
We are engaged in joint program planning or curriculum review with TVET partners	3.74	37.8
Hotels maintained communication with TVET Institutions about student progress	3.42	46.1
Internships and experiential learning programs are structured with clear learning outcomes.	3.71	42.0
We have a formal MoU/ongoing collaboration with at least one TVET provider.	3.39	38.7
Our hotel provides regular feedback to TVET institutions on graduate performance	3.81	36.4
TVET instructors undertake industry attachments at our hotel to keep their skills current.	3.88	34.6
The partnership facilitates successful recruitment and placement of graduates.	3.78	32.3
Graduates had sufficient real-hotel exposure before employment (e.g., industry hours).	4.09	28.9
Partnerships facilitate recruitment/placement for suitable roles.	3.61	45.3
TVET trainers do industry attachments/refreshers, keeping content up to date.	3.83	36.9

Source: Survey Data (2025)

Housekeeping (23. 1%) were the two areas with the most staff representation, indicating that competence assessments from the practical and interpersonal skills-based departments are being considered. This supports the rationale of workplace learning in hospitality education because competency is built through the application of practical skills in a service environment. As part of Ghanaian TVET reforms, the importance of workplace learning and stronger ties with industry for graduate employability has increased. The majority of hotels had an eco-rating between 1 and 3 years (43. 6%) or between 4 and 6 years (36. 7%). This indicates that hotels are indeed increasingly adopting sustainable strategies. In terms of size, the majority of hotels had between 151 and 300 rooms (53. 0%) and an occupancy rate of between 61% and 75% (44. 7%), indicating that respondents were working in fairly busy hotels that have reliable information on the performance of graduates. These demographic details show that the participants are drawn from a variety of hotel categories, departments and operational settings. Hence, the study's findings could be regarded as having a high degree of reliability since the job competency of TVET graduates was studied across different hospitality settings and not just a single organization. Thus, the findings underscore the importance of hands-on training and industry linkages in Ghana's active overhaul of technical vocational education and training to be industry responsive.

Quality of Industry Partnerships

Similarly, hotel management and TVET institution relationships results were also analyzed using mean and CV as shown in Table 2. The findings indicated that, on the whole, hotel and TVET institution relationship was a moderately strong but uneven relationship. Average mean scores ranged from 3. 39 to 4. 09, and in general

display the rather positive perception: as expected, perceptions of these types of activity varied across the different types of activity. This result is of particular interest because it was the indicators measuring direct contact with the workplace and industry engagement that had comparatively high scores, whereas those measuring formalization, communication and placement mechanisms had comparatively low scores. Among the highest rated indicators was that exposure to real hotels before employment is enough for TVET graduates ($M = 4. 09$, $CV = 28. 9\%$). The high mean and low CV suggests respondents strongly agreed and were fairly consistent that hotel exposure is an important part of TVET training. This is consistent with Thapa (2018) who found that work-based learning develops technical, generic and personal employability skills and Folson and Awuah (2026) who found that workplace experience learning in Ghana can provide learners with meaningful engagement with industry practices and professional networks. On the other hand, however, their study found that exposure quality was hampered by placement mismatches, inadequate supervision on the part of the mentors, and little collaboration between the schools and industry. This could mean that even though the present study scored a high mark, the hotels are offering exposure opportunities to the students in general. The mean scores for industry professionals visiting schools to give lectures or seminars ($M = 3. 95$) and working together for the planning of programs and curricula ($M = 3. 94$) further underscore that partnerships between TVET and industry extend beyond internship to include knowledge transfer and curriculum development. Njengele et al. (2024) also note that partnerships between TVET and industry can support work-based learning and the relevance of institutions among advances in technology and the workplace. Recent evidence of employer-partnering for training providers suggests the benefits for training providers include staff training and better meeting employer needs.

In a similar vein, formalization and coordination of partnerships seems to occur at a considerably different level. The average rating for formal MoU or sustained cooperation with at least one TVET provider is the lowest ($M = 3.39$, $CV = 38.7\%$) and communication of student development is second lowest ($M = 3.42$, $CV = 46.1\%$) among hotel questions, suggesting that while practice may show a closer interaction, ties between hotels and TVET institutions are neither firmly established, nor are they formal. With regard to student progress communication, for example, the very high CV means there is an important variation in perception of hotel communication to TVET institutions among the interviewees. This finding is consistent with Folsom and Awuah (2026), who found that the barriers to effective workplace learning in Ghana were poor institutions' coordination, inadequate mentoring, and institutional barriers. Njengele et al. (2024) also found that TVET and industry collaboration differed in purpose, management structure, and level of commitment. However, this study's results differ somewhat from Bantilan (2025), who found that very wide-ranging industry partnerships and high-quality and often-invoked industry engagement were important predictors of job readiness, which may be due to contextual and institutional factors. Bantilan studied participants in vocational education programs in the Philippines, whereas this study investigates hotels and TVET institutions in Ghana. The institutional structure, business expectations, resources, partnership maturity, and workplace learning organization may differ in the Philippines and Ghana, affecting perceived partnership quality in both countries. The recruitment and placement results supported this uneven pattern. Respondents also agreed that partnerships help recruit and place people ($M = 3.78$, $CV = 32.3\%$). However, placement in suitable roles did have a lower mean value ($M = 3.61$) and a larger CV (45.3%): it is possible that the partnerships are creating jobs, but the success in placing them into jobs related to their skills is less consistent. This is because the value of industry engagement is not necessarily measured by whether students have been exposed to workplace experiences, or whether they have been employed, but also whether they have built skills and capabilities. Overall, partnerships with industry seem to be stronger in providing real exposure in hotel workplaces and interaction with the industry than in formal coordination, monitoring, and systematic placement. The difference between the high rating for exposure in hotel workplaces and the low rating for formal partnership mechanisms may exist for the same reason: hotels can provide practical opportunities without formal important institutional partnerships. Thus, it is not only about increasing partners, but also to strengthen formal agreements, communication, monitoring of students and provided feedback, structured outcomes of the learning process, and placement of graduates in industry. This

may help translate existing exposures to the industry into more concrete and measurable competencies for students. From an analytical perspective, this shows that the partnership system between Ghanaian TVET and the hotel industry is functioning, but needs further institutionalization and consistency. The qualitative data were analyzed following the thematic analysis method to identify the emergent patterns, in relation to quality, of the existing partnerships between hotel and TVET institutions. This led to the emergence of five themes: internship-based partnership, practical skills development, limited industry involvement in curriculum design, institutionalized collaboration, and employment and retention rate. The themes provide further context to these quantitative findings, suggesting that the existence of a partnership does not necessarily mean that the partnership is both thorough and calculated. The first theme was internship-centred partnerships. Participants described partnerships as being concentrated on student attachments and internships, with some describing the lack of formal institutional partnership as follows: "This was captured by the statement, 'Apart from internships, there is no strong partnership.'" The initial codes of limited partnership, internship-focused collaboration, and informal relationship were therefore grouped under the broader theme of internship-centred partnerships. This suggests that hotels and TVET institutions interact primarily when students require workplace placement rather than through continuous institutional collaboration. The second theme was skills development. Participants also conveyed that internships help students apply knowledge learned in class to real hotel settings. The statement that students "get the chance to practice what they learned in school" was coded as application of classroom knowledge and practical exposure. The theme reflects the premise that the transfer of learning from the classroom to the job is an important mechanism to develop work skills. Therefore, these responses provide qualitative support for the quantitative finding that industry partnerships positively contribute to graduate job readiness. The third theme concerned limited industry involvement in curriculum development and training decisions. Statements such as "We are not involved in curriculum planning or training decisions" and "We are rarely asked about the skills we need" were coded as limited curriculum participation, weak industry input, and skills-gap communication. These codes were combined into the theme of limited industry participation in curriculum development. The responses suggest a potential disconnect between what TVET institutions teach and the competencies required by hotels. The fourth theme was the need for institutionalized collaboration. Respondents proposed regular meetings, seminars, workshops, joint advisory boards, and dual-training arrangements. These responses were coded as stakeholder coordination, regular communication, joint

curriculum planning, and structured workplace learning. Collectively, these codes indicate that respondents favor a shift from informal, placement-based relationships towards more formal and sustained partnerships. Participants mentioned 'employment and retention outcomes, such as participants getting hired on full-time after their internship, and graduates who had worked in hotels continuing to stay longer in their jobs'. The responses were then coded as transition from intern-to-employee, recruitment pathway, workplace adaptation, and employee retention. This suggests that partnerships can have employment outcomes much wider than training, for example recruitment and workforce stability. Overall, these qualitative coding categories largely validate the findings: existing partnerships provide valuable practical exposure and employment opportunities, but continue to be largely internship-focused, and not sufficiently included in curriculum and institutional decision-making. This also helps explain why formal collaboration and communication scored low while practical exposure scored highly in the quantitative findings.

Measurement Model and Regression Diagnostics

Table 3: Multicollinearity Analysis

Predictor Variable	Tolerance	VIF	Comment
Practical Training	0.381	2.623	No multicollinearity
Quality of Partnerships	0.453	2.208	No multicollinearity

Dependent Variable: Job Competence

Source: Survey Data (2025)

Results from the measurement model assessment and regression diagnostics showed that the data collected for this study were adequate for conducting inferential analysis (Table 3). The measurement model assessment was concerned with assessing the sampling adequacy and internal consistency of the scales used to measure the constructs, Practical Training and Quality of Industry Partnerships, and the regression diagnostics were concerned with assessing multiple regression assumptions. The KMO measures of Practical Training (721) and Quality of Industry Partnerships (751) in the measurement model were above the acceptable cutoff of 70. Therefore, the correlations between the measurement items of each of the proposed latent variables were sufficiently compact for factor analysis in both solutions as well. Additionally, Bartlett's Test of Sphericity was statistically meaningful at the $p < .001$ level for both constructs. That is, the correlation matrix was not equal to the identity matrix, indicating that the items contained in the measures were interrelated enough to warrant further analysis with respect to the constructs. Cronbach's alpha results showed moderate levels of internal consistency for these two scales, as follows: (i) Practical Training 0.706 and (ii) Quality of Industry Partnerships 0.772. This suggests that on the whole, the measurement items had

adequate reliability, that is, the items of each construct had a sufficiently high level of correlation in measuring the respective construct. So such evidence of reliability is best interpreted as evidence of internal consistency rather than evidence of construct validity. Then, regression diagnostic tests showed that the data were appropriate for multiple regression analysis. Also, linearity was confirmed by the fact that the results of the tests for deviation from linearity were not statistically important. This suggests that it is reasonable to use a linear model to describe the relationship between Practical Training and Job Competence and between Quality of Industry Partnerships and Job Competence. The normality assumption was also met, because the Shapiro-Wilk tests were not statistically important ($p > .05$), indicating no statistically important evidence of departure from normality. Visual inspection of these residual scatterplots also indicated that the residuals did not violate the assumption of homoscedasticity (the assumption that the variance of the residuals is constant at all levels of Job Competence). Meeting these assumptions effectively increases the confidence of the regression coefficients and statistical tests that were computed. Finally, the diagnostic tests for multicollinearity on the covariates indicated less redundancy between the two independent variables. For Practical Training, the tolerance was equal to 0.381 and the VIF was equal to 2.623, while for Quality of Partnerships, the tolerance was equal to 0.453 and the VIF was equal to 2.208. Because both the tolerance values are greater than 0.20 and the VIF values are less than 5, multicollinearity is not a serious problem. Hence, it is assumed that the variables Practical Training and Quality of Partnerships could be included in the same regression equation without seriously distorting the regression coefficients. Overall, the findings suggest an acceptable level of sampling adequacy and internal consistency of the instrument, and the underlying assumptions of multiple regression analysis. All of the above findings provide methodological evidence that the multiple regression analysis to test whether Practical Training and Quality of Industry Partnerships considerably predict Job Competence can be conducted. More relevantly, these diagnostic results say nothing about the existence and strength of the relationships in the model; they only relate the fit of the model to the data. These can be inferred from the regression coefficients, their importance, their confidence intervals, and the power of the model to explain the variation in the data.

Hypothesis Testing

Since all the assumptions of multiple linear regression were satisfied, multiple regression analysis was used to model the predictive power of Practical Training and Quality of Industry Partnerships for TVET graduates' job

Table 4: Multiple Regression Model Summary Predicting Graduate Job Competency

Model	R	R ²	Adjusted R ²	Std. Error of Estimate	F	df1	df2	Sig.
1	0.640	0.515	0.505	0.29994	138.60	2	261	<0.001

Predictors: (Constant), Practical Training, Quality of Industry Partnerships

Dependent Variable: Job Competency of TVET Graduates

Table 5: Regression Coefficients for Direct Relationship Model

Predictor Variable	Beta	SE	Beta	t	Sig. (p)
Constant	3.465	0.177	—	19.561	<.001
Practical Training	0.154	0.029	0.312	5.318	<.001
Quality of Partnerships	0.068	0.029	0.148	2.326	.021

Dependent Variable: Job Competency of TVET Graduates

Predictors: Constant, Practical Training, Quality of Partnerships

Source: Survey Data (2025)

competency. The summary of the multiple linear regression model is displayed in Table 4. The regression results in Table 4 indicate that Practical training and Quality of Industry Partnerships are moderately strong predictor variables of graduate job competency, with an R value of 0.640. Practical Training and Quality of Industry Partnerships as independent variables together explain 51.5% of the variance in graduate job competency ($R^2 = 0.515$, adjusted $R^2 = 0.505$). Taken together, this suggests that practical experience and the partnership with industry have great explanatory power in determining variance in the competency of employed hospitality TVET graduates. The model was important $F(2,261) = 138.60$, $p < 0.001$, indicating Practical Training and Quality of Industry Partnerships as meaningful predictors of graduate job competency. The evidence suggests that students cannot gain competency in a job in TVET education by classroom training alone and that students require opportunities to practice what they have learnt in authentic workplace settings and to be familiarized with the workplace environment. From an experiential learning perspective, workplace experiences enable learners to convert learned theoretical knowledge into skills via participation, reflection, and application (Billett, 2011). Literature on hospitality education has also indicated that WIL has a role to play in developing professional skills, flexibility, and career readiness (Boonkaew et al., 2025). The model's explanatory nature further reaffirms the need for better collaboration between TVET institutions and key industry organizations in producing work-ready graduates. These partnerships would enable curriculum mapping, provide workplace immersion, offer mentoring opportunities, and support employer feedback, thereby improving the alignment of vocational education programs with labor market needs (Md Yusof et al., 2025). This is consistent with the view that partnerships between education institutions and

industry stakeholders can support the transfer of knowledge and resources to develop workplace skills. The model still cannot explain 48.5% of the variance in graduate job competency. Other elements, not including work-based learning and industry engagement, may also play a role in what contributes to graduate job competency including institutional capacity, curriculum quality, learner characteristics, workplace support and organizational learning environments. Past research has advocated the need for supervision, mentoring, coordination, and structure of the engagement with industry to improve the quality of workplace learning outcomes (Chen et al., 2025; Folson & Awuah, 2026). In summary, the evidence from Table 4 suggests that practical learning and industry collaboration can be important complementary mechanisms to foster occupational competencies of TVET students. Practical learning contributes to the occupational capabilities of TVET students, while industry collaboration complements practical learning by creating conditions for the development of strengths in the workplace. The individual contributions of each predictor variable have been further investigated by estimating their respective regression coefficients (Table 5).

Regression coefficients predicting graduate job competency

To assess the individual effects of Practical Training and Quality of Industry Partnerships on TVET graduates' job competency, we refer to the regression coefficients in Table 5. The regression results indicate that both Practical Training and Quality of Industry Partnerships had a positive and statistically significant effect. The findings further revealed that Practical Training is a positive predictor of graduate competency ($\beta = 0.312$, $B = 0.154$, $t = 5.318$, $p < 0.001$). This meant that the practical training undertaken by a TVET graduate act as a positive

predictor to TVET graduate competency. Therefore, Hypothesis 1 was supported, as practical training was found to have a meaningful relationship with workplace competencies among hospitality TVET graduates. Therefore, practical learning environments provide opportunities for the transfer of theory to practice and for the development of practical work skills. Thapa (2024) stated that work-based learning improves employability skills through opportunities for learners to experience workplace situations to develop technical skills, problem-solving skills, and professional confidence. In line with this, Suyitno et al. (2025) also find evidence for work-based learning influencing employability development, and support the notion that individual self-efficacy and vocational identity help learners translate workplace experience into professional skills. This further increases the current study's claim that experiential learning should be used to prepare TVET students for service-based occupations, particularly hospitality.

The results also show that Quality of Industry Partnerships has an important and positive effect on graduate job competence ($\beta = 0.148$, $B = 0.068$, $t = 2.326$, $p = 0.021$), so hypothesis 2 is supported. The results suggest that better cooperation between TVET institutions and the hospitality industry will improve the job competence of graduates. These results suggest that industry partnerships enable currency in vocational education and training by providing workplace exposure, industry exposure, mentoring and employer assessment of graduate performance. This finding agrees with Md Yusof et al. (2025) who argue that industry embedded work integrated learning practices can improve the employability of students through connecting the learning at educational institutions with the work settings. In another study, Folsom and Awuah (2026) found that, in Ghana, workplace experience learning exposes students to the industry and supports their networking in the industry. However, the authors noted that advantages of workplace learning vary with placement ($\beta = 0.312$) was found to be a better predictor of student competence for graduate job compared to Quality of Industry Partnerships ($\beta = 0.148$). The practical implication of these results is that although the industry partnerships help provide the environment for students to be engaged in exposure to work and knowledge sharing, competence is actually developed through practical training. Moreover, partnerships are most effective when they support structured and supervised competency-based practical training opportunities, rather than informal internship-like placements. This supports the view that greater interaction between training providers and the labor market is needed to ensure TVET systems are relevant and effective. Such collaboration allows employers to have a say over the relevance of the curriculum, articulate the competency needs of the labor market, and provide

feedback on the quality of training (Commeys et al., 2023; Md Yusof et al., 2025). However, as this study's qualitative findings suggest, placements for the internship alone may not be sufficient for developing competencies in practice, and should also include sustained engagement, curriculum input, mentoring and workplace-based assessment. Based on the results presented in Table 5, it is established that Practical Training and Quality of Industry Partnerships remain important predictors of graduates' competency, with Practical Training being a comparatively stronger one than Quality of Industry Partnerships. Therefore, to improve the competency of the TVET graduates, it is vital to work on increasing the opportunities for practical training and improving the quality and governance of the TVET-industry partnerships.

Conclusion

The study investigated the relationship between practical training and collaboration between industry and technical and vocational education and training (TVET) institutions and the job competencies of TVET graduates in three to five-star hotels in Accra, Ghana. The results indicated that the competencies of graduates are correlated with both practical training and collaboration. The findings suggest that work-based training has greater predictive power, and that structured workplace learning is critical for translating vocational knowledge into workplace competence. The value of industry partnerships is dependent on the form they take. Beyond internships, structured partnerships need to include, but not be limited to, curriculum, mentoring, assessment and feedback. This study contributes to the TVET and hospitality education literature by moving the focus away from describing the existence of industry partnerships to assessing the quality and functionality of those partnerships in producing work-ready graduates. The study adds to the literature on competency development from the employers' perspective through the assessment of the industry managers and supervisors who hire and appraise graduates. Theoretically, these findings have extended experiential learning and social exchange perspectives by showing that graduate competency has developed as a function of the complementarity between gainful workplace experience and the reciprocity between TVET institutions and industry in terms of workplace exposure, workplace knowledge transfer, and professional development during practical training in the TVET system. The trade for TVET institutions, hospitality enterprises and policymakers is to shift from a qualification-based model to a competency-based model of authentic on-the-job learning, continuous industry engagement and collaboration between industry and TVET institutions for curriculum co-design, workplace coaching, competency assessment and continued dialogue with TVET institutions to ensure graduates meet the industry

competencies expected in the hospitality industry.

Recommendations

Based on the results from the study, three recommendations on the improvement of the competency development of TVET graduates in the hospitality industry in Ghana are made. TVET institutions in Ghana should introduce or strengthen the use of a structured and competency-based practical training strategy, as Practical Training was found to be an important predictor of graduate job competency ($\beta = 0.312$). Practical training of students should be on-the-job, supervised by appropriately qualified personnel, based on a specification of learning outcomes, competency-assessed and should incorporate practical hospitality-related functions. Practical training should help students apply theory to practice and develop technical and professional skills appropriate to the workplace. Second, Formal MoU or existing partnerships between the hotels and TVET institutions had the lowest mean partnership rating ($M = 3.39$). Institutionalized partnerships between training providers and industry organizations are urgently needed. TVET institutions and hospitality employers need to move beyond internship-based partnerships to institutionalized partnerships with mechanisms for joint curriculum building, workplace assessments, employer feedback and continuous engagement. Such partnerships can improve the degree to which TVET training outcomes can meet the relevant competency expectations of the hospitality industry. Third, the communication rating, $M = 3.42$, between hotels and TVET institutions was lower and qualitative findings indicated that industry input into curriculum design process was limited. Industry involvement in the experiential training process would need to be increased, with hospitality employers involved in the curriculum review process. They should also be involved in student mentoring and assessment processes, which contribute to the develop of graduate competencies. Once these linkages are strengthened this will support moving from qualification-based training to a more responsive competency-based TVET system.

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