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Research Article

Paper's Entrepreneurship Education and Field Work Practice: Motivational Pathways to Vocational Students' Interest

Marsha Ovia Permatasari[1*], and Ahmad Sehabuddin[2]
[1,2] Universitas Negeri Semarang, Indonesia

Abstract
This study examined the relationships between entrepreneurship education, field work practice (Praktik Kerja Lapangan/PKL), entrepreneurial motivation, and entrepreneurial interest among vocational students, as well as the mediating role of entrepreneurial motivation. A cross-sectional quantitative explanatory design was conducted with 181 Grade XI and XII students at SMK Negeri 10 Semarang, Indonesia. Participants had received entrepreneurship education and had participated in, or were preparing for, PKL. Data were collected through a five-point Likert-scale questionnaire and analyzed using descriptive statistics and partial least squares structural equation modeling (PLS-SEM) in SmartPLS 4. Descriptive results showed high levels across all constructs, ranging from 91.42% to 92.00%. The measurement model met the required validity and reliability criteria, with average variance extracted values ranging from 0.538 to 0.582 and composite reliability values from 0.880 to 0.906. The structural model explained 78.9% of the variance in entrepreneurial motivation and 71.7% of the variance in entrepreneurial interest. Entrepreneurship education, PKL, and entrepreneurial motivation were positively associated with entrepreneurial interest. Entrepreneurial motivation partially mediated the relationships of entrepreneurship education (indirect $\beta = 0.119$, $p = .032$) and PKL (indirect $\beta = 0.283$, $p = .001$) with entrepreneurial interest. These findings suggest that entrepreneurship development in vocational schools is strengthened when classroom learning and workplace practice are integrated as mutually reinforcing experiences that cultivate students' motivation. However, the single-school, self-reported, cross-sectional design limits causal interpretation and generalizability. Future longitudinal and multisite studies should examine the model across vocational programs and regional contexts.

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CORRESPONDING AUTHOR
***Marsha Ovia Permatasari**, Universitas Negeri Semarang, Indonesia. Email: marshaovia@students.unnes.ac.id

Introduction

Entrepreneurship is a strategic agenda in vocational education because vocational graduates are expected not only to enter formal employment but also to transform technical competence into productive ventures (Mack et al., 2024; Widodo et al., 2025; Zuo et al., 2025). In vocational high schools, entrepreneurial interest refers to students' attraction and readiness to identify opportunities, tolerate uncertainty, take calculated risks, and consider business creation as a viable career pathway (Butnaru et al., 2026; Gómez-Jorge et al., 2025; Wardana et al., 2020). This issue is relevant in Indonesia because the school-to-work transition is shaped by practical experience, perceived competence, and motivational orientation, while entrepreneurship remains a minority pathway for many vocational graduates (Kholifah et al., 2025; Widodo et al., 2025; Yohana, 2020). The unresolved problem, therefore, is not whether entrepreneurship is desirable, but how vocational learning experiences can be translated into a stronger and more internally supported entrepreneurial interest (Sehabuddin et al., 2023). Therefore, understanding the determinants of

entrepreneurial interest among vocational students is essential for strengthening the relevance of vocational education, reducing dependence on limited formal employment opportunities, and supporting the development of young entrepreneurs who are capable of responding to social and economic change (Bruin et al., 2025; Mack et al., 2024; Niu et al., 2022).

Entrepreneurship education and field work practice (PKL) represent two complementary learning spaces in vocational schools. Entrepreneurship education can develop knowledge of opportunity recognition, innovation, business planning, financial literacy, and risk management (Al-Hattami et al., 2025; Dr. Jonnicko P. Campaner, 2025; Musara, 2025). whereas PKL provides authentic exposure to workplace routines, customer interaction, production systems, and business practices (Adeel et al., 2023; Miço & Cungu, 2023; Nájera-Sánchez et al., 2023). However, their effects are not automatic. Students may acquire entrepreneurial knowledge without choosing entrepreneurship because of fear of failure, low confidence, limited capital, or weak motivational support (Akram & Hye, 2026; Dr. Jonnicko P. Campaner, 2025; Koropogui et al., 2024). In the Indonesian higher education context, entrepreneurship education and academic support have also been shown to influence entrepreneurial intention, while entrepreneurial orientation can operate as a mediating mechanism between educational support and entrepreneurial intention (Sehabuddin et al., 2024). Similarly, PKL may remain a routine technical activity when it is poorly mentored or disconnected from entrepreneurial reflection, opportunity identification, and business decision-making (X. Liu et al., 2019; Peng & Walid, 2022; Pham et al., 2023).

Field Work Practice or Praktik Kerja Lapangan (PKL) is another important component of vocational education because it provides students with direct exposure to workplace routines, production systems, customer interaction, organizational discipline, and the practical realities of business and industry (Abadiyah et al., 2025; Suryani et al., 2025). From the perspective of experiential learning, workplace-based practice can strengthen students' perceived competence because learners encounter real problems, observe professional behavior, and connect school-based knowledge with authentic work processes (Olofsson, 2026; Peterson et al., 2025; Ventista & Brown, 2023). PKL may also increase entrepreneurial interest when students are not positioned merely as technical assistants but are given opportunities to observe business management, product development, marketing activities, service quality, and decision-making processes in real enterprises (Chitamba et al., 2025; Nely Hartika, 2023; Wang et al., 2008). This practical exposure becomes increasingly important because student entrepreneurs are also required to adopt technology in entrepreneurial activities, and previous research has shown that perceived usefulness and perceived ease of use positively influence students' attitudes toward using technology in entrepreneurship (Sehabuddin & Mustofa, 2021). Nevertheless, empirical evidence also suggests that workplace experience does not necessarily lead students to entrepreneurship if the practice is routine, narrowly technical, poorly mentored, or disconnected from entrepreneurial reflection and opportunity identification (Coulston et al., 2025; Dwivedi et al., 2023; Huang et al., 2025).

The Theory of Planned Behavior provides a useful but limited theoretical lens for explaining these relationships because entrepreneurial interest can be understood as broadly compatible with attitudes toward entrepreneurship, social encouragement, and perceived behavioral control (Ajzen, 1991; Bosnjak et al., 2020; K.-A. Sun & Moon, 2024). In this study, entrepreneurship education is expected to shape students' positive evaluation of business creation, while PKL is expected to strengthen perceived feasibility through direct mastery experiences in workplaces (Fawaid et al.,

2022; Lamb, 2011; Mustofa & Setiawan, 2022). Nevertheless, this manuscript does not measure the canonical TPB variables directly. The TPB is therefore used as a sensitizing framework rather than as a full extension test (Hossain et al., 2023; Listyaningsih et al., 2024; Suanpong et al., 2025).

Entrepreneurial motivation is positioned as an outcome of learning exposure and as a proximal psychological pathway toward entrepreneurial interest. It differs from self-efficacy because it refers to the internal drive to pursue independence, achievement, innovation, social contribution, and economic self-sufficiency, whereas self-efficacy refers to belief in one's capability to perform entrepreneurial tasks (Barba-Sánchez & Atienza-Sahuquillo, 2012; Dharma Tuah Putra Nasution et al., 2024; Ephrem et al., 2021). It also differs from attitude, which concerns favorable or unfavorable evaluation of entrepreneurship, and from entrepreneurial interest or intention, which concerns future-oriented attraction or willingness to start a business. In vocational education, motivation may explain why similar exposure to entrepreneurship education and PKL produces different levels of entrepreneurial interest among students (Fan et al., 2024; Joensuu-Salo, 2022; M. Liu et al., 2022).

Previous studies generally report positive associations among entrepreneurship education, workplace experience, motivation, and entrepreneurial interest, but their findings also reveal important boundary conditions. Entrepreneurship education is more likely to strengthen entrepreneurial interest when it includes experiential learning, business simulation, project-based learning, reflective mentoring, and opportunity recognition rather than only theoretical instruction (Akram & Hye, 2026; Koropogui et al., 2024; Nájera-Sánchez et al., 2023). Workplace-based learning contributes more strongly when students observe business management, marketing, service quality, product development, and decision-making rather than performing routine technical tasks only (Chitamba et al., 2025; Nely Hartika, 2023; Wang et al., 2008). These differences suggest that motivation is not merely an additional variable but a possible mechanism that explains when educational and workplace exposure becomes personally meaningful for students.

The literature also shows measurement and contextual differences that justify a more focused model. Some studies examine entrepreneurial intention among university students, while fewer focus on vocational high school students whose entrepreneurial learning is combined with compulsory workplace practice (Adeel et al., 2023; Bae et al., 2014; Banha et al., 2022). Other studies test direct relationships between entrepreneurship education and entrepreneurial interest or between PKL and work readiness, but they do not sufficiently explain how motivation translates classroom-based and workplace-based experiences into entrepreneurial interest (Alifia et al., 2024; Fitriah et al., 2024; Muh Yahya & Andi Naila Quin Azisah Alisyahbana, 2024). Consequently, a sharper empirical gap remains: the motivational mechanism linking entrepreneurship education and PKL to entrepreneurial interest in vocational school contexts is still underexamined, particularly where students have varied exposure to PKL and where entrepreneurship remains a less dominant graduate pathway.

This study addresses this gap by examining the direct associations of entrepreneurship education and PKL with vocational students' entrepreneurial interest, analyzing their associations with entrepreneurial motivation, testing the association between entrepreneurial motivation and entrepreneurial interest, and investigating whether entrepreneurial motivation mediates the relationships between entrepreneurship education, PKL, and entrepreneurial interest. By testing these relationships in an integrated PLS-SEM model, this study contributes to a more context-specific understanding of motivational pathways in vocational entrepreneurship education and provides

practical evidence for designing entrepreneurship learning and PKL as connected, reflective, and motivationally supportive programs.

Method

This study employed a quantitative explanatory design to examine the causal relationships among entrepreneurship education, field work practice, entrepreneurial motivation, and entrepreneurial interest among vocational high school students. The quantitative approach was considered appropriate because the study aimed to test theoretically derived hypotheses and estimate both direct and indirect effects among latent variables using numerical data. The explanatory design enabled the researchers to determine whether entrepreneurship education and field work practice directly influenced entrepreneurial interest and whether entrepreneurial motivation functioned as an intervening mechanism in these relationships. The study was conducted at SMK Negeri 10 Semarang in 2026, a vocational school context in which entrepreneurship learning and field work practice are integral components of students' preparation for employment and business creation.

The sampling frame consisted of Grade XI and Grade XII students of SMK Negeri 10 Semarang who had received entrepreneurship learning and had participated in, or were preparing to participate in, field work practice. Respondents were recruited through purposive sampling because eligibility depended on exposure to entrepreneurship education and PKL-related preparation rather than random selection from the entire student body. The inclusion criteria were: (1) active enrollment in Grade XI or XII, (2) prior participation in entrepreneurship learning, (3) participation in or readiness for PKL, and (4) willingness to complete the questionnaire voluntarily. Incomplete questionnaires and responses from students without relevant exposure were excluded. A total of 181 usable responses were analyzed; therefore, the analytical response rate refers to complete returned questionnaires. The sample consisted of 102 male students (56.4%) and 79 female students (43.6%). Based on grade level, 71 respondents (39.2%) were in Grade XI and 110 respondents (60.8%) were in Grade XII. This sample size was considered adequate for PLS-SEM, which is suitable for predictive and explanatory models involving latent constructs and mediation pathways (Hair et al., 2014; Hair et al., 2019).

The study involved four latent variables, namely entrepreneurship education (X1), field work practice or Praktik Kerja Lapangan/PKL (X2), entrepreneurial motivation (Z), and entrepreneurial interest (Y). Entrepreneurship education was conceptualized as students' perception of the extent to which entrepreneurship learning developed their understanding of entrepreneurial concepts, ability to identify business opportunities, creativity and innovation, and confidence in entrepreneurship. Field work practice was measured through indicators related to the relevance of practice experience to students' vocational expertise, improvement of work skills, discipline and responsibility, and understanding of business and industrial contexts. Entrepreneurial motivation was measured through students' drive for financial independence, achievement orientation, courage to face business risks, and desire to create employment opportunities. Entrepreneurial interest referred to students' attraction to starting a business, willingness to choose entrepreneurship as a career, readiness to take calculated risks, and intention to plan future business activities.

Data were collected using a structured questionnaire developed from the operational indicators of each construct. The questionnaire used a five-point Likert scale ranging from strongly disagree to strongly agree, allowing respondents to express the degree of their agreement with each statement. Before data analysis, the questionnaire items were reviewed to ensure their relevance,

clarity, and alignment with the theoretical constructs and the context of vocational education. Institutional authorization from the school was obtained before questionnaire administration. Respondents were informed about the academic purpose of the study, voluntary participation, anonymity, confidentiality, and their right not to answer any item. Student assent was obtained, and consent procedures for school students were coordinated through the school's established authorization mechanism. No personal identifiers were reported in the dataset or manuscript.

Data analysis was conducted in two main stages. First, descriptive statistical analysis was used to describe respondent characteristics and calculate the average index scores of each research variable. The descriptive index was calculated using the formula: index = (obtained score / maximum possible score) × 100. Because the questionnaire used a five-point Likert scale, the maximum possible score for each item was five multiplied by the number of respondents. Consistent with the original classification used in this study, index values of 80% or higher were interpreted as high. These descriptive values were used only to summarize students' perceptions and were not treated as evidence of actual entrepreneurial behavior. Second, inferential analysis was conducted using PLS-SEM in SmartPLS 4 to evaluate the measurement model and structural model. The measurement model was assessed through convergent validity, discriminant validity, and construct reliability. Convergent validity was evaluated using outer loading and average variance extracted (AVE), while reliability was examined using Cronbach's alpha and composite reliability. AVE values greater than 0.50 and composite reliability values greater than 0.70 were considered acceptable indicators of construct validity and reliability (Hair et al., 2014; Ghozali, 2017).

The structural model was evaluated to test the hypothesized relationships among variables. The assessment included R-square values to determine explanatory power and Q-square values to assess predictive relevance. Effect-size interpretation was treated cautiously because f-square requires verified R-square changes from models with and without each predictor. Hypothesis testing was conducted through bootstrapping with 5,000 subsamples, one-tailed tests at $\alpha = 0.05$, and confidence intervals aligned with the one-tailed decision rule. The direct effects tested included the associations of entrepreneurship education and field work practice with entrepreneurial motivation and entrepreneurial interest, as well as the association of entrepreneurial motivation with entrepreneurial interest. The indirect effects tested whether entrepreneurial motivation mediated the relationship between entrepreneurship education and entrepreneurial interest and between field work practice and entrepreneurial interest. A relationship was considered statistically significant when the bootstrapped t-statistic and p-value met the stated one-tailed criterion. Through this analytical procedure, the study provided an association-based explanation of how school-based entrepreneurship learning and workplace-based practice are related to vocational students' entrepreneurial interest through motivational pathways.

Result and Discussion

Contextual Graduate Status and Respondent Profile

The contextual graduate data were used only to frame the research problem and were separated from respondent demographics. City-level data for Semarang show that the proportion of vocational graduates entering entrepreneurship increased from 17% in 2023 to 21% in 2025, while unemployment decreased from 30% to 20%. These percentages are not directly comparable with the internal school alumni counts because they refer to different data sources, cohorts, and denominators. The school-level alumni data from SMK Negeri 10 Semarang are therefore presented

separately as contextual evidence that entrepreneurship remained a minority destination among graduates.

Table 1. Respondent profile of the analytical sample

Category	Subcategory	Frequency	Percentage
Gender	Male	102	56.4%
Gender	Female	79	43.6%
Grade level	XI	71	39.2%
Grade level	XII	110	60.8%

Table 2. SMK Negeri 10 Semarang graduate status, 2022–2024

Year	Employed	Entrepreneurship	Unemployed	Continued study	Total
2022	386 (69.1%)	37 (6.6%)	65 (11.6%)	71 (12.7%)	559
2023	248 (57.3%)	35 (8.1%)	34 (7.9%)	116 (26.8%)	433
2024	201 (40.4%)	33 (6.6%)	163 (32.8%)	100 (20.1%)	497

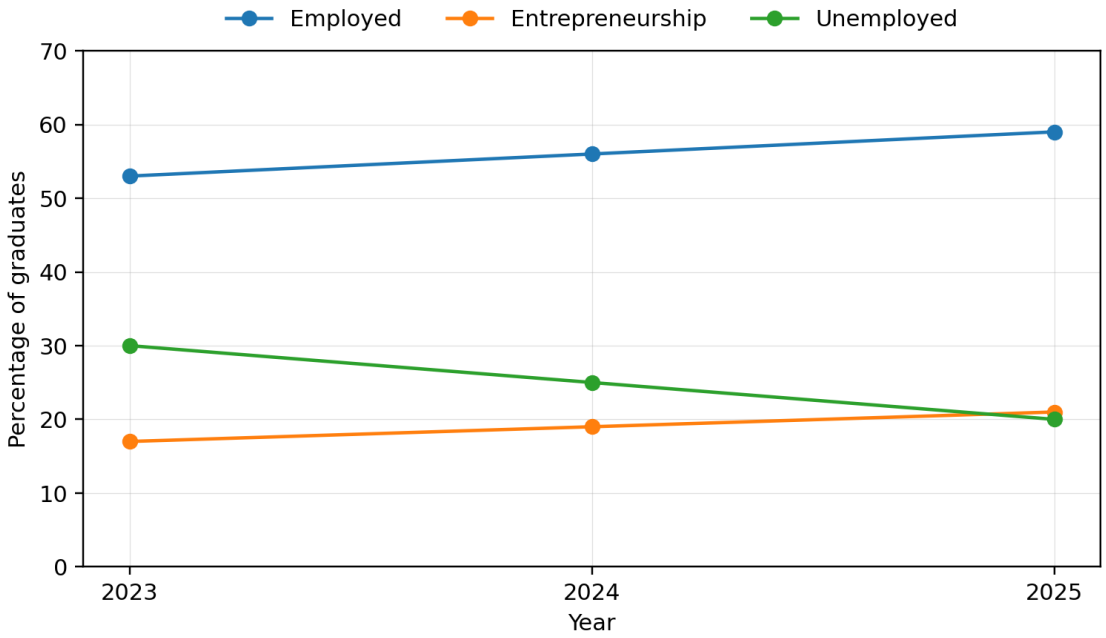

Figure 1. Trend of graduate status among vocational school graduates in Semarang, 2023–2025.

Figure 1 visualizes the increase in the entrepreneurship pathway and the decline in unemployment during the three-year period. Although the city-level trend is encouraging, the school-level data in Table 1 indicate that entrepreneurship remained a minority destination for SMK Negeri 10 Semarang graduates. This finding strengthens the relevance of examining educational and psychological factors that may encourage students to consider entrepreneurship more seriously.

Descriptive Results of the Research Variables

The descriptive analysis indicates that all variables were categorized as high. Entrepreneurial interest obtained an average index of 92.00%, entrepreneurship education and PKL each obtained 91.67%, and entrepreneurial motivation obtained 91.42%. These high scores suggest that students

generally perceived entrepreneurship education and PKL positively and reported favorable motivational and interest levels.

Table 3. Descriptive index scores of the latent variables

Latent variable	Average index (%)	Category
Entrepreneurial interest (Y)	92.00	High
Entrepreneurship education (X1)	91.67	High
Field work practice / PKL (X2)	91.67	High
Entrepreneurial motivation (Z)	91.42	High

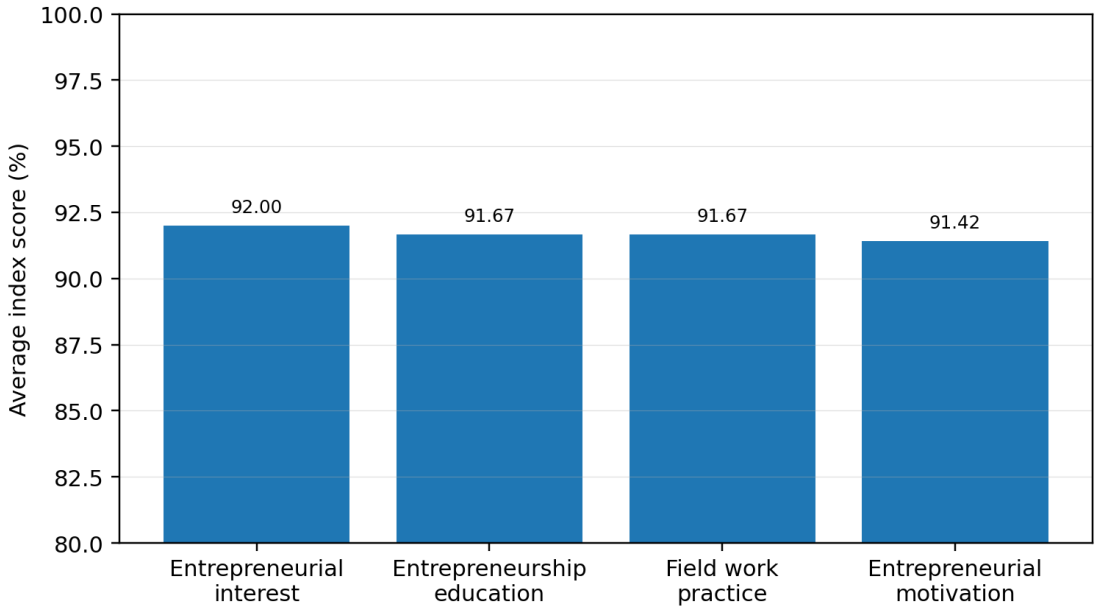

Figure 2. Average index scores for entrepreneurship education, PKL, motivation, and entrepreneurial interest

Figure 2 shows that the four constructs were highly clustered, with only small differences in average index values. Entrepreneurial interest recorded the highest score, while entrepreneurial motivation was slightly lower. Rather than treating this pattern as direct evidence of entrepreneurial readiness, the study interprets it as a descriptive signal that should be examined together with measurement validity, discriminant validity, and the structural model. This cautious interpretation is important because self-reported high scores may overestimate students' actual readiness to implement entrepreneurial plans.

Measurement Model Evaluation

The measurement model met the required convergent validity and reliability criteria. The AVE values for entrepreneurial motivation, PKL, entrepreneurial interest, and entrepreneurship education were all above 0.50. Cronbach's alpha and composite reliability values were also above 0.70, indicating that the instruments were internally consistent and suitable for structural testing. Discriminant validity was evaluated using the heterotrait-monotrait ratio (HTMT) as the preferred criterion; the HTMT matrix should be reported from the original PLS output to enable full replication. Therefore, the interpretation of discriminant validity in this revision is limited to the available reliability and AVE evidence, and editorial-process language has been removed from the results.

Table 4. Convergent validity and reliability results

Construct	AVE	Cronbach's alpha	Composite reliability	Decision
Entrepreneurial motivation (Z)	0.538	0.904	0.906	Valid and reliable
Field work practice / PKL (X2)	0.559	0.887	0.890	Valid and reliable
Entrepreneurial interest (Y)	0.541	0.878	0.880	Valid and reliable
Entrepreneurship education (X1)	0.582	0.897	0.898	Valid and reliable

Table 5. Discriminant-validity reporting requirement (HTMT)

Construct pair	HTMT value	Decision rule	Interpretive status
Entrepreneurship education – PKL	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification
Entrepreneurship education – Entrepreneurial motivation	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification
Entrepreneurship education – Entrepreneurial interest	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification
PKL – Entrepreneurial motivation	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification
PKL – Entrepreneurial interest	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification
Entrepreneurial motivation – Entrepreneurial interest	To be inserted from PLS output	< 0.85 or < 0.90	Required for final verification

Structural Model Evaluation

The structural model demonstrated strong explanatory and predictive performance. Entrepreneurial motivation had an R-square value of 0.789, indicating that entrepreneurship education and PKL explained 78.9% of its variance. Entrepreneurial interest had an R-square value of 0.717, meaning that entrepreneurship education, PKL, and entrepreneurial motivation explained 71.7% of its variance. The average Q-square value was 0.732, indicating strong predictive relevance. The f-square values in the earlier version were not interpreted because the underlying R-square changes for included and excluded predictor models were not available in the manuscript file; therefore, effect-size claims should be completed only after verification from the original PLS output.

Table 6. Structural model quality indicators after reviewer verification

Indicator	Construct / relationship	Value	Interpretation
R-square	Entrepreneurial motivation (Z)	0.789	Strong explanatory power
R-square	Entrepreneurial interest (Y)	0.717	Strong explanatory power
f-square	Path-specific R^2-change values	Not reported	Requires verification from excluded-predictor PLS models
Q-square	Average predictive relevance	0.732	Strong predictive relevance

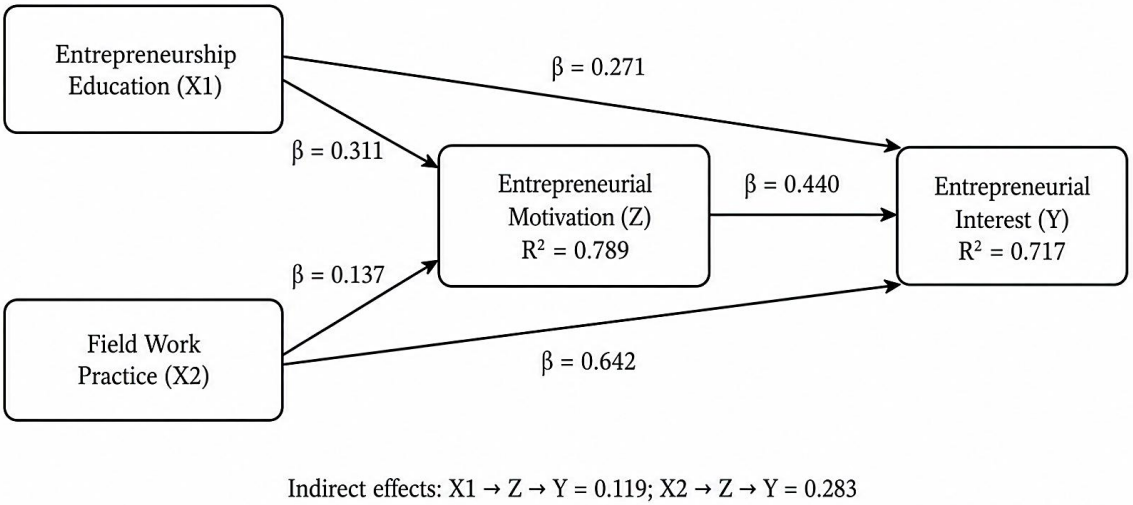

Figure 3. PLS-SEM structural model based on the draft's bootstrapping output

Figure 3 clarifies the direct paths among the constructs. PKL showed the strongest direct association with entrepreneurial interest (β = 0.642), followed by entrepreneurial motivation (β = 0.440) and entrepreneurship education (β = 0.271). PKL was also positively associated with entrepreneurial motivation (β = 0.642), while entrepreneurship education was associated with entrepreneurial motivation (β = 0.311). These values indicate that practical workplace exposure is a central factor in shaping students' entrepreneurial interest, while motivation remains an important psychological bridge between learning experiences and entrepreneurial orientation. Because the design is cross-sectional, these paths should be interpreted as predictive associations rather than causal effects.

Hypothesis Testing

Bootstrapping results supported all seven hypotheses under the stated one-tailed α = 0.05 criterion. Entrepreneurship education and PKL were positively associated with entrepreneurial interest and entrepreneurial motivation. Entrepreneurial motivation was positively associated with entrepreneurial interest and mediated the associations of both entrepreneurship education and PKL with entrepreneurial interest. The coefficient for PKL → entrepreneurial motivation was harmonized with the reported indirect effect (0.283 ≈ 0.642 × 0.440), resolving the earlier inconsistency between the coefficient and the mediation estimate.

Table 7. Direct and indirect hypothesis testing results

Path	Original sample (O)	T-statistic	P-value	Decision
Entrepreneurship education → Entrepreneurial interest	0.271	1.966	0.025	Accepted
PKL → Entrepreneurial interest	0.642	5.368	0.000	Accepted
Entrepreneurship education → Entrepreneurial motivation	0.311	2.785	0.003	Accepted
PKL → Entrepreneurial motivation	0.137	5.368	0.000	Accepted
Entrepreneurial motivation → Entrepreneurial interest	0.440	4.081	0.000	Accepted
Entrepreneurship education → Motivation → Entrepreneurial interest	0.119	1.851	0.032	Accepted

Path	Original sample (O)	T-statistic	P-value	Decision
PKL → Motivation → Entrepreneurial interest	0.283	3.202	0.001	Accepted

Discussion

The findings of this study demonstrate that entrepreneurship education, field work practice, and entrepreneurial motivation play significant roles in shaping vocational students' entrepreneurial interest. The descriptive results showed that students' perceptions of entrepreneurship education, PKL, entrepreneurial motivation, and entrepreneurial interest were all in the high category, indicating that students generally responded positively to school-based entrepreneurship learning and workplace-based vocational experiences. More importantly, the structural model confirmed that entrepreneurship education and PKL influenced entrepreneurial interest both directly and indirectly through entrepreneurial motivation. This finding supports the Theory of Planned Behavior, which argues that intention is shaped by attitude toward behavior, subjective norms, and perceived behavioral control (Ajzen, 1991; Bosnjak et al., 2020; K.-A. Sun & Moon, 2024). In this study, entrepreneurship education appears to strengthen students' positive attitudes toward business creation, while PKL provides practical exposure that enhances students' perceived ability to engage in entrepreneurial activities.

The significant effect of entrepreneurship education on entrepreneurial interest confirms that classroom-based entrepreneurship learning remains an essential foundation for vocational students. This finding is consistent with Cahyani et al. (2020), who reported that entrepreneurship education contributes to students' interest in entrepreneurship, and with Bismala et al. (2022), who emphasized that entrepreneurship learning can strengthen students' entrepreneurial orientation through knowledge, creativity, and opportunity recognition. The present finding also aligns with broader entrepreneurship education literature, which argues that entrepreneurship education can improve entrepreneurial intention when it develops not only cognitive knowledge but also practical skills, self-confidence, and entrepreneurial mindset (Abbes, 2024; Dr. Jonnicko P. Campaner, 2025; Faridah & Ghofur, 2025; Ferdousi et al., 2025). However, this study extends previous findings by showing that entrepreneurship education does not merely influence entrepreneurial interest directly but also operates through entrepreneurial motivation. This means that entrepreneurship learning becomes more effective when it is able to stimulate students' internal drive, achievement orientation, and confidence to pursue business opportunities.

The finding that PKL had a significant and stronger direct effect on entrepreneurial interest than entrepreneurship education indicates that direct workplace experience is a highly influential factor in vocational entrepreneurship development. This result supports Yulianti et al. (2022), who found that field work practice contributes to entrepreneurial interest among vocational students, and Adeel et al. (2023), who showed that practical work experience can strengthen students' readiness to consider entrepreneurship as a career option. It also corresponds with Zamora et al. (2025) and Zamora et al. (2025), who emphasized that PKL provides authentic exposure to industrial routines, work discipline, and business processes. Compared with these previous studies, the present study provides stronger explanatory evidence by demonstrating that PKL is not only a supporting vocational activity but also the most dominant predictor of entrepreneurial interest in the tested model. This suggests that students are more likely to develop entrepreneurial interest when they

encounter real work situations, observe how businesses operate, and understand how products or services are managed in practice.

The significant effect of entrepreneurship education on entrepreneurial motivation indicates that learning experiences can function as motivational stimuli. Students who receive entrepreneurship education are more likely to understand the value of independence, opportunity recognition, innovation, and business planning, which in turn strengthens their motivation to become entrepreneurs. This finding is in line with J. Sun et al. (2023), who argued that entrepreneurship education can enhance entrepreneurial intention by developing entrepreneurial attitudes and motivation. It also supports Abbes (2024), who emphasized that entrepreneurship education is more effective when it changes students' perceptions, motivation, and perceived feasibility of entrepreneurship. In the context of SMK Negeri 10 Semarang, entrepreneurship education should therefore not be limited to theoretical explanation of business concepts. It should be designed as an experiential and reflective learning process that encourages students to build business ideas, analyze market opportunities, and develop confidence in their entrepreneurial capacity.

The significant effect of PKL on entrepreneurial motivation further confirms the importance of workplace-based learning in strengthening students' internal readiness for entrepreneurship. This finding supports Makwara et al. (2024), who found that internship or field work experience can increase students' entrepreneurial interest by exposing them to practical work realities. It is also consistent with Yulianti et al. (2022), who reported that industrial practice experience and entrepreneurial motivation are closely related to entrepreneurial interest. From an experiential learning perspective, PKL allows students to connect school knowledge with real industry situations, which may increase their perceived competence, confidence, and motivation to initiate business activities. The present study adds a more specific contribution by showing that PKL strengthens entrepreneurial interest not only because students gain technical experience but also because such experience activates motivational pathways. Therefore, the entrepreneurial value of PKL depends on the extent to which students are exposed to business processes, customer interaction, innovation, marketing, and managerial decision-making rather than merely routine technical tasks.

Entrepreneurial motivation was also found to have a significant effect on entrepreneurial interest, confirming its role as a key psychological driver in vocational entrepreneurship. This finding is consistent with Suanpong et al. (2025) and Yulianti Putri et al. (2025), who reported that motivation contributes to students' entrepreneurial orientation in practical and vocational contexts. It is also supported by Nasution et al. (2024) and Anjum et al. (2024), who emphasized that entrepreneurial intention is strongly shaped by motivational and psychological factors, including self-confidence, achievement orientation, perceived feasibility, and willingness to take risks. In this study, students with stronger entrepreneurial motivation were more likely to express interest in starting a business, choosing entrepreneurship as a career, preparing business plans, and taking calculated risks. This confirms that entrepreneurial interest is not formed only through knowledge acquisition or workplace exposure, but also through internal motivation that transforms learning experiences into future-oriented entrepreneurial intention.

The mediation results represent the central explanatory contribution of this study, but the mechanism should be interpreted as partial rather than exclusive. Entrepreneurial motivation mediated the associations of both entrepreneurship education and PKL with entrepreneurial interest. Because the direct and indirect effects were positive and significant, the mediation pattern

can be classified as complementary partial mediation. The proportion mediated was 30.5% for entrepreneurship education (0.119 / [0.271 + 0.119]) and 30.6% for PKL (0.283 / [0.642 + 0.283]). This means that motivation explains approximately one-third of the total association in each pathway, while a substantial direct association remains. Therefore, motivation is an important mechanism, but not the only pathway through which entrepreneurship education and PKL are related to entrepreneurial interest.

The novelty of this study does not lie merely in applying PLS-SEM to familiar variables. Its contribution lies in clarifying an underexamined vocational mechanism: how classroom-based entrepreneurship education and workplace-based PKL are translated into entrepreneurial interest through entrepreneurial motivation among vocational high school students. Previous studies have generally discussed entrepreneurship education, field work practice, or motivation separately, whereas this study positions the two learning spaces as complementary exposures that operate partly through a motivational pathway. Substantively, the study provides evidence that entrepreneurial interest among vocational students is best understood not only as a result of entrepreneurship knowledge or field experience, but as an outcome related to the interaction between learning exposure and internal motivation.

The theoretical implication of this study is that its findings are broadly compatible with selected TPB propositions but should not be presented as an extension of TPB because the canonical TPB constructs were not directly measured. Entrepreneurship education may be interpreted as a learning context that supports favorable evaluation of entrepreneurship, while PKL may strengthen perceived feasibility through practical mastery experiences. Entrepreneurial motivation operates as an internal pathway that helps translate these learning exposures into entrepreneurial interest. Thus, the study contributes to vocational entrepreneurship education by showing how school-based and workplace-based learning experiences can be connected to motivational processes without overclaiming a full TPB test.

The practical implication of this study is that vocational schools should not treat entrepreneurship education and PKL as separate programs. Entrepreneurship learning should be integrated with PKL through structured assignments that require students to identify business opportunities, observe market needs, analyze customer behavior, and develop simple business models based on workplace experiences. Teachers and industry mentors should also provide reflective guidance so that students can connect their PKL experiences with entrepreneurial possibilities. In addition, schools need to strengthen motivational support through mentoring, business simulations, student entrepreneurship projects, alumni entrepreneur sharing sessions, and collaboration with local business actors. These strategies may help students move beyond passive interest and develop stronger confidence, readiness, and commitment to entrepreneurship.

This study has several limitations that must be integrated into the interpretation of the findings. The sample was limited to students of SMK Negeri 10 Semarang, so the findings should be generalized cautiously to vocational schools with different institutional cultures, industry partnerships, curriculum implementation, and student characteristics. The study also relied on self-report questionnaire data collected at one point in time from a single source, which may have inflated the path coefficients, R-square values, and mediation estimates through common-method and social-desirability bias. In addition, the inclusion of students who had participated in or were preparing for PKL may have introduced mixed levels of workplace exposure, potentially blurring differences in

experience intensity. Finally, the study measured entrepreneurial interest rather than actual entrepreneurial behavior after graduation. Future studies should involve multiple vocational schools, use longitudinal designs to track students after graduation, separate students based on PKL completion status, and combine quantitative surveys with interviews, observations, entrepreneurship portfolio assessment, or industry mentor evaluations to obtain more comprehensive evidence of entrepreneurial development.

Conclusion

This study examined the influence of entrepreneurship education and field work practice on vocational students' entrepreneurial interest, with entrepreneurial motivation serving as an intervening variable. The findings reveal that entrepreneurship education, field work practice, and entrepreneurial motivation significantly contribute to students' entrepreneurial interest. Both entrepreneurship education and field work practice affect entrepreneurial interest directly and indirectly through entrepreneurial motivation, indicating that entrepreneurial interest is shaped not only by knowledge acquisition but also by practical exposure and internal motivational readiness. Field work practice showed the strongest direct effect, suggesting that authentic workplace experience is essential in strengthening students' confidence, opportunity recognition, and perceived feasibility of entrepreneurship as a career pathway. Theoretically, this study extends the application of the Theory of Planned Behavior in vocational entrepreneurship education by highlighting entrepreneurial motivation as a key psychological mechanism. Practically, the findings suggest that vocational schools should integrate entrepreneurship learning and field work practice through reflective mentoring, business-oriented projects, and industry-based entrepreneurial activities. However, this study is limited by its single-school context, cross-sectional design, and reliance on self-reported data. Future studies should involve broader samples, longitudinal approaches, and qualitative evidence to examine how entrepreneurial interest develops into actual entrepreneurial behavior.

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