

Entrepreneurial Intentions of Vocational High School Students in Malang: A Study of the Contribution of Entrepreneurship Education, Communication Skills, and Digital Marketing

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ABSTRACT

The low level of entrepreneurial intention among vocational school graduates remains a problem that contributes to high open unemployment rates. This study aims to examine the effect of entrepreneurship education and communication skills on entrepreneurial intention, with digital marketing as a mediating variable. The study uses a quantitative approach with data collection using a closed questionnaire, examining 16 indicators from 4 variables being tested. The sample consisted of 194 12th-grade students from the Business and Management program at Muhammadiyah Vocational School in Malang Regency. The results showed that entrepreneurship education and communication skills had a positive effect on entrepreneurial intent, and digital marketing was found to mediate this relationship. These findings emphasize the importance of integrating digital based entrepreneurship education to support graduates' readiness to become entrepreneurs.

INTRODUCTION

The high rate of open unemployment among vocational school graduates, which reached 9.01% in 2024, indicates that graduates are unprepared to enter an increasingly competitive job market. This condition confirms that the orientation of vocational school students, who still depend on formal employment, has hampered the development of entrepreneurial potential, even though entrepreneurship is a strategic solution in facing the limitations of formal employment. Low entrepreneurial intention is a crucial factor that needs attention because intention is the main predictor of entrepreneurial behavior, as emphasized by Liñán and Chen (2009).

Entrepreneurship education plays an important role in shaping students' entrepreneurial mindsets, attitudes, and competencies. Kuratko (2016) and Fayolle & Gailly (2015) emphasize that structured, experience-based education can increase interest and readiness for entrepreneurship. In addition, communication skills are an integral element in the process of forming entrepreneurial intent, as effective communication skills influence persuasion, business networking, and opportunity negotiation. The perspective of Baron and Markman (2000) further emphasizes the strategic function of communication in identifying and utilizing entrepreneurial opportunities.

Amidst technological developments, entrepreneurship education and communication skills are increasingly effective when integrated with the use of digital marketing. Digital marketing provides space for students to directly apply their business knowledge through social media, marketplaces, and other digital platforms. Research by Tiago and Veríssimo (2014) and Dwivedi et al. (2021) shows that the use of digital platforms can transform entrepreneurial knowledge and communication skills into concrete business behavior, thereby potentially increasing entrepreneurial intent.

However, previous studies have focused more on university students or business owners, while studies on vocational high school students – particularly in the context of integrating entrepreneurship education, communication skills, and digital marketing – are still limited. In addition, there has been little research that places digital marketing as a mediating variable in the formation of entrepreneurial intent among students, even though this generation is digitally native and very familiar with technology.

Based on these research gaps, this study offers theoretical and empirical contributions through the development of a comprehensive model that integrates entrepreneurship education, communication skills, and digital marketing in predicting the entrepreneurial intentions of vocational school students at Muhammadiyah Malang Regency. This study aims to analyze the influence of entrepreneurship education and communication skills on entrepreneurial intention, as well as to examine the mediating role of digital marketing as a factor that strengthens the relationship between these variables. The findings of this study are expected to enrich the literature on technology-based entrepreneurship and to become the basis for strengthening a more adaptive vocational entrepreneurship curriculum in response to the demands of the digital era.

LITERATURE REVIEW

Grand Theory

1. Human Capital Theory (HCT)

The Human Capital Theory proposed by Becker (1964) asserts that education, training, and skills are forms of investment that increase an individual's productive capacity. In the context of entrepreneurship, entrepreneurial education and communication skills are viewed as human capital that can strengthen individuals' readiness to face the dynamics of business. Entrepreneurial education equips students with knowledge, mindsets, and basic competencies about the business world, while communication skills strengthen interpersonal abilities such as idea delivery, negotiation, and business relationship management.

2. Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (Ajzen, 1991) explains that behavioral intentions are influenced by attitudes, subjective norms, and perceived behavioral control. In the context of entrepreneurship, entrepreneurship education shapes positive attitudes toward business activities, while communication skills enhance individuals' perceived behavioral control in managing challenges. TPB provides a psychological explanation of how human capital enhancement can be translated into actual intentions to become an entrepreneur.

In the context of digitalization, digital marketing reinforces the perception of behavioral control because it provides easy market access, low promotion costs, and opportunities for innovation. Therefore, digital marketing can serve as a bridge connecting human capital with entrepreneurial intent.

Previous Relevant Research

H1: Entrepreneurship education has a positive effect on entrepreneurial intention.

A number of studies show that entrepreneurship education has a significant effect on entrepreneurial intention. Zheng and Islam (2021) found that entrepreneurship education increases self-efficacy and indirectly encourages entrepreneurial intention. Wardana et al. (2020) showed the positive influence of entrepreneurship education on entrepreneurial intention through self-efficacy and attitude. Aragon & Sanchez (2017) emphasized that practical entrepreneurship training increases readiness and interest in entrepreneurship.

H2: Communication skills have a positive effect on entrepreneurial intention.

In addition, communication skills have also been proven to contribute significantly to the formation of entrepreneurial intent. Al Mamun et al. (2020) found that communication skills increase self-confidence in facing business challenges. Karimi et al. (2019) showed that communication strengthens perceived behavioral control, which in turn increases entrepreneurial intention. Susanti et al. (2022) confirmed that vocational high school students with high verbal communication skills show a greater tendency to become entrepreneurs.

H3: Entrepreneurship education has a positive effect on the utilization of digital marketing.

Entrepreneurship education has been proven to influence the use of digital marketing. Kurniawan et al. (2023) and Purwana et al. (2021) found that a digitalbased entrepreneurship curriculum increases the use of online marketing strategies. Handayati et al. (2020) showed that digital marketing can serve as a mediator between entrepreneurship education and entrepreneurial intent.

H4: Communication skills have a positive effect on the use of digital marketing.

In addition, communication skills are also an important predictor in the use of digital marketing. Hassan et al. (2021) found that communication skills increase the effectiveness of digital promotion. Susanti et al. (2022) showed that students with high communication skills are more active in utilizing digital media in business activities.

H5: Digital marketing has a positive effect on entrepreneurial intention.

Digital marketing then acts as a determinant of entrepreneurial intention. Husnah et al. (2023), Raza et al. (2021), and Nabi et al. (2018) state that digital marketing skills increase perceptions of ease and business opportunities, thereby strengthening entrepreneurial intention.

H6: Digital marketing mediates the effect of entrepreneurship education on entrepreneurial intention.

Other findings indicate that digital marketing can mediate the relationship between entrepreneurship education and entrepreneurial intention (Kurniawan et al., 2023; Handayati et al., 2020). Understanding digital strategies provides a channel for actualizing entrepreneurial abilities that increase readiness to start a business.

H7: Digital marketing mediates the influence of communication skills on entrepreneurial intent.

Digital marketing also mediates the relationship between communication skills and entrepreneurial intention. Solesvik (2017) and Karimi et al. (2019) emphasize that effective communication strengthens self-efficacy in implementing digital marketing strategies, which ultimately increases entrepreneurial intention.

The conceptual framework of this study integrates Human Capital Theory and Theory of Planned Behavior. Entrepreneurship education and communication skills as forms of human capital are predicted to influence entrepreneurial intention directly and indirectly through digital marketing. Digital marketing is positioned as a mediating variable that strengthens the mechanism of influence through increased digital knowledge, perceived behavioral control, and practical readiness to start a business. The conceptual framework is as shown in Figure 1.

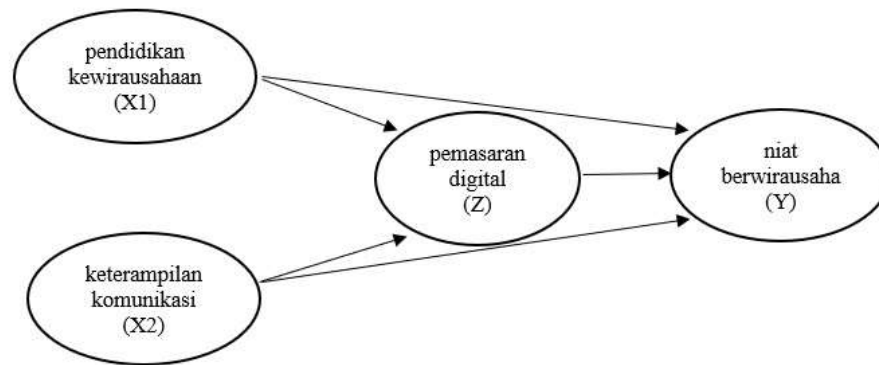


Figure 1. Conceptual Framework

METHODOLOGY

Provide clear and concise versions of your methods of conducting research, population and samples, and data analysis tools.

Population and Sample

The population in this study consisted of all 12th grade students enrolled in the Business and Management program at four Muhammadiyah vocational schools in Malang Regency, totaling 388 students. This population was selected based on the consideration that final year students had undergone comprehensive entrepreneurship education and were in the process of forming their interests and career orientations, making them relevant for study in the context of entrepreneurial intent. The sample size was determined using Qualtrics' Size calculator with a 95% confidence level, a 5% margin of error, and a population proportion of 50%, resulting in a minimum requirement of 194 respondents. The sampling technique used *proportional random sampling*, which is the proportional distribution of samples according to the number of students in each school and concentration of expertise, so that all subgroups are represented evenly and do not cause representation bias.

Measurement

Data collection was conducted using a closed-ended questionnaire with a five-point Likert scale, ranging from "strongly disagree" to "strongly agree." Each variable – entrepreneurship education, communication skills, digital marketing, and entrepreneurial intention – was measured using indicators developed based on theoretical foundations and previous research results. The research instrument first underwent **content validity testing** by experts to ensure that the indicators were appropriate for the constructs being measured. After that, a *pilot test* was conducted to examine the clarity of the items and ensure the initial reliability of the instrument. This measurement approach ensured that the data obtained had an adequate level of accuracy and consistency for quantitative analysis.

Data Analysis

The data were analyzed using the *Partial Least Squares Structural Equation Modeling* (PLS-SEM) method with SmartPLS software. This method was chosen

because the research model was complex, involving relationships between latent constructs and mediating variables, and allowing analysis of medium sample sizes without assuming normal distribution. The analysis was conducted in two stages, namely evaluation of *the outer model* and *inner model*. The outer model included *convergent validity* testing ($AVE \geq 0.50$), *construct reliability* (*Composite Reliability* and *Cronbach's Alpha* ≥ 0.70), and discriminant validity using the Fornell–Larcker and HTMT criteria (< 0.90). *The inner model* was analyzed through the coefficient of determination (R^2), *effect size* (f^2), predictive relevance (Q^2), and SRMR as model fit indicators. Hypothesis testing was conducted using a bootstrapping procedure with 5,000 subsamples to evaluate the significance of direct and indirect relationships. The digital marketing mediation test was analyzed through *indirect effect* and *total effect* values with reference to the mediation classification of Zhao et al. (2010).

RESEARCH RESULTS

The results of the study indicate that entrepreneurship education is in the good category with **a grand mean of 3.67**, reflecting that most students have a positive perception of the entrepreneurship material, methods, and learning experiences provided at school. The frequency findings show that more than half of the respondents consistently chose the "agree" category on indicators related to understanding business concepts, courage to take risks, and simple business practice experiences, thus reinforcing that entrepreneurship learning contributes significantly to shaping an entrepreneurial orientation. This condition is in line with the theory of planned behavior, which asserts that entrepreneurial knowledge and experience can strengthen attitudes and beliefs about one's abilities, which ultimately encourages interest in entrepreneurship.

The communication skills variable also showed strong findings, as indicated by the highest frequency in the "agree" category for the indicators of clarity of speech, courage in expressing ideas, and negotiation skills. These findings support the literature that states that communication is a key soft skill in entrepreneurship because it functions in the process of convincing customers, building networks, and effectively conveying product value. Thus, the high frequency of values on this variable illustrates the strategic role of communication skills in strengthening entrepreneurial interest.

On the other hand, digital marketing as a mediating variable also showed good results, with the majority of respondents choosing the "agree" category on indicators of the ability to use social media for promotion, understanding digital segmentation, and creating marketing content. This consistently high frequency distribution shows that students are not only familiar with digital media, but also already use it to promote products in a simple way.

The steps in SEM-PLS analysis include: (1) evaluation of the measurement model (*outer model*); (2) evaluation of the structural model (*inner model*); (3) *goodness of fit*; and (4) hypothesis testing.

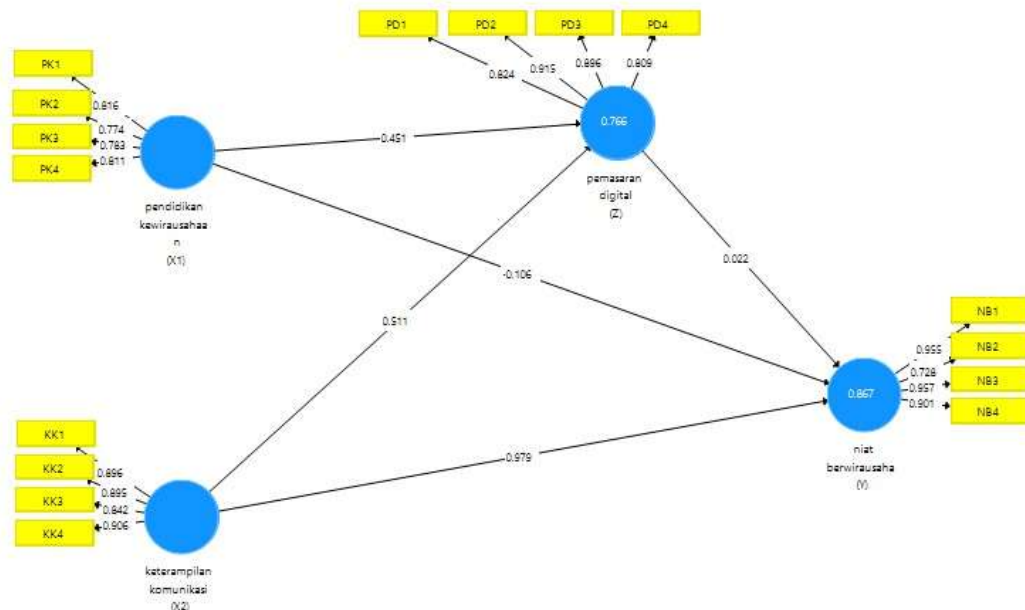


Figure 2 Data analysis results

Evaluation of the Measurement Model (outer model)

The validity and reliability test results show that all variables in the research model have good measurement quality. This can be seen from the Factor Loading value of each indicator, which is above the minimum limit of 0.70, indicating that each indicator is able to strongly represent its construct. For the Communication Skills variable (X2), the loading values ranged from 0.842 to 0.906, indicating that indicators KK1-KK4 contributed significantly to capturing the communication skills of vocational school students. The Composite Reliability (CR) value of 0.935 and AVE of 0.783 further emphasize that this construct has high internal consistency and convergent validity. This means that students in class XII at SMK Muhammadiyah Kabupaten Malang do indeed demonstrate solid communication skills based on the respondents' perceptions.

Table 1. Outer Model Estimation

Variable	Indicator	Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	AVE
Entrepreneurship Education (X1)	PK1	0.816	0.820	0.874	0.634
	PK2	0.774			
	PK3	0.783			
	PK4	0.811			
Communication Skills (X2)	KK1	0.896	0.907	0.935	0.783
	KK2	0.895			
	KK3	0.842			
	KK4	0.906			
Entrepreneurial Intent (Y)	NB1	0.955	0.909	0.938	0.793

	NB2	0.728			
	NB3	0.957			
	NB4	0.901			
Digital Marketing (Z)	PD1	0.824	0.884	0.920	0.743
	PD2	0.915			
	PD3	0.896			
	PD4	0.809			

a. Discriminant Validity

The results of the Fornell-Larcker Criterion test show that all constructs in the model have met the discriminant validity criteria, which means that each variable is able to distinguish itself from other variables adequately. This can be seen from the AVE square root value (shown on the bold diagonal) which is higher than the correlation between variables in the same row and column. For the Communication Skills variable (X2), the AVE root value of 0.885 is higher than its correlation with Entrepreneurial Intent (0.928), Digital Marketing (0.805), and Entrepreneurship Education (0.651). Although there is a fairly strong correlation with the entrepreneurial intention variable, the AVE root value still dominates, so that variable X2 is declared to have good discriminant ability.

Fornell-Larcker Criterion

Table 2. Discriminant validity

	communication skills (X2)	Entrepreneurial intention (Y)	Digital marketing (Z)	entrepreneurship education (X1)
entrepreneurship education (X1)	0.651	0.549	0.784	0.796
Communication skills (X2)	0.885			
entrepreneurial intention (Y)	0.928	0.890		
Digital marketing (Z)	0.805	0.728	0.862	

b. Cross Loading

	Communication skills (X2)	Entrepreneurial Intentions (Y)	Digital Marketing (Z)	Entrepreneurship education (X1)
KK1	0.896	0.722	0.824	0.670
KK2	0.895	0.944	0.595	0.447
KK3	0.842	0.651	0.832	0.756
KK4	0.906	0.956	0.611	0.447
NB1	0.885	0.955	0.617	0.475
NB2	0.685	0.728	0.758	0.513
NB3	0.888	0.957	0.610	0.459

NB4	0.830	0.901	0.646	0.528
PD1	0.889	0.719	0.824	0.656
PD2	0.619	0.557	0.915	0.713
PD3	0.620	0.562	0.896	0.705
PD4	0.597	0.642	0.809	0.624
PK1	0.378	0.324	0.464	0.816
PK2	0.310	0.268	0.416	0.774
PK3	0.370	0.360	0.570	0.783
PK4	0.790	0.630	0.848	0.811

The cross-loading test results show that most of the indicators in this study have met the discriminant validity requirements, as they have higher loading values in their respective constructs compared to other constructs.

Structural Model (Inner Model)

a. Testing Collinearity

As explained earlier, *collinearity* testing was conducted to see whether there was high *collinearity* between variables. This was done by looking at the *variance inflation factor* (VIF) coefficient, where the VIF value must be lower than 5.00 (Hair, et al., 2020).

Table 4 Testing *collinearity*
Outer VIF Values

	VIF
KK1	4.638
KK2	8,478
KK3	3,836
KK4	8,819
NB1	7,331
NB2	1,614
NB3	7,931
NB4	3,883
PD1	1,750
PD2	5,877
PD3	5,225
PD4	1,907
PK1	2,268
PK2	2,072
PK3	1,793
PK4	1,343

From the table above, it can be seen that the indicators in the Communication Skills construct (X2) have several fairly high VIF values. KK1 (4.638) and KK3 (3.836) are still within safe limits, but KK2 (8.478) and KK4 (8.819) are in the range approaching the upper limit of multicollinearity

tolerance. This indicates that the two indicators have a very strong correlation with each other or with other indicators in the same construct. This condition is still acceptable, but researchers need to be careful because VIF above 8 can reduce the accuracy of parameter estimation.

For the Entrepreneurial Intention (Y) variable, indicators NB1 (7.331) and NB3 (7.931) have VIFs above 7, indicating a very strong linear relationship between indicators, which has the potential to cause multicollinearity. However, indicators NB2 (1.614) and NB4 (3.883) are still within a safe range. In general, despite the high VIF values, the overall construct is still acceptable in PLS because PLS-SEM is more tolerant of multicollinearity than covariance-based models (CBSEM).

In the Digital Marketing (Z) variable, the PD1 (1.750) and PD4 (1.907) indicators show low VIF values, indicating that they are free from multicollinearity. The other two indicators, PD2 (5.877) and PD3 (5.225), slightly exceed the ideal limit (< 5), but are still within the tolerance range. This is reasonable considering that these two indicators have a high correlation with each other due to the similarity of measurement content in the digital marketing variable.

In the Entrepreneurship Education construct (X1), all indicators PK1, PK2, PK3, and PK4 have low VIF values (1.343 – 2.268). This indicates that this construct does not have multicollinearity issues and that the four indicators work independently in explaining the variable. This also indicates the good quality of the instrument in terms of entrepreneurship education.

b. Testing Path Coefficients

Table 5 Path Coefficient Test (β)

	Relationship	B
H ₁	entrepreneurship education_(X1)_ -> entrepreneurial intention_(Y)_	0.277
H ₂	Communication skills (X2) -> Entrepreneurial intention (Y)	1.023
H ₃	entrepreneurship education_(X1)_ -> digital marketing_(Z)_	0.475
H ₄	communication skills_(X2)_ -> digital marketing_(Z)_	0.446
H ₅	Digital marketing (Z) -> Entrepreneurial intention (Y)	0.149
H ₆	entrepreneurship education_(X1)_ -> digital marketing_(Z)_ -> entrepreneurial intention_(Y)_	0.071
H ₇	Communication skills (X2) -> Digital marketing (Z) -> Entrepreneurial intention (Y)	0.066

Based on the results of testing the relationship between variables (*path coefficient*) shown in the table above, the following analysis can be made:

H1: entrepreneurship education (X1) → entrepreneurial intention (Y)

The path coefficient $\beta = 0.277$ indicates that entrepreneurship education has a positive effect on entrepreneurial intention. This means that the better the quality of entrepreneurship learning—including understanding business concepts, case studies, business practices, and instilling an entrepreneurial mindset—the greater the students' interest in starting a business.

H2: Communication skills (X2) → entrepreneurial intention (Y) The path coefficient value of $\beta = 1.023$ indicates that communication skills have a very strong direct influence on entrepreneurial intention. This large coefficient value confirms that the better students' communication skills—including interpersonal communication, speaking skills, conveying ideas, and persuading others—the higher their confidence in entering the world of entrepreneurship.

H3: entrepreneurship education (X1) → digital marketing (Z)

The path coefficient $\beta = 0.475$ indicates a fairly strong positive influence of entrepreneurship education on digital marketing skills. This finding shows that a good entrepreneurship curriculum not only conveys business theory but also equips students with modern marketing skills, including digital marketing.

H4: Communication skills (X2) → Digital marketing (Z)

The path coefficient $\beta = 0.446$ shows that communication skills have a positive and fairly strong effect on digital marketing skills. This means that the better a person's communication skills are, the higher their ability to create interesting digital content, convey marketing messages, and manage interactions on digital platforms such as Instagram, TikTok, marketplaces, and other social media.

H5: Digital marketing (Z) → Entrepreneurial intention (Y)

The path coefficient $\beta = 0.149$ indicates that digital marketing has a positive but relatively small influence on entrepreneurial intention. This means that although the ability to use digital platforms, create content, and market products online can increase interest in entrepreneurship, its influence is not as great as the role of communication skills and entrepreneurship education.

H6: Entrepreneurship education (X1) → Digital marketing (Z) → Entrepreneurial intention (Y)

The mediation effect $\beta = 0.071$ shows that digital marketing also mediates the relationship between entrepreneurship education and entrepreneurial intention, but this mediation is relatively weak. This means that a small portion of the effect of entrepreneurship education on entrepreneurial intention occurs through an increase in digital marketing skills.

H7: Communication skills (X2) → Digital marketing (Z) → Entrepreneurial intention (Y)

The mediation effect of $\beta = 0.066$ shows that digital marketing weakly mediates the relationship between communication skills and entrepreneurial intention. This means that a small portion of the influence of communication skills on entrepreneurial intention is channeled through digital marketing skills. However, because the mediating effect is small, it can be concluded that communication has a greater direct influence on entrepreneurial intent (see H1), and digital marketing does not significantly strengthen this relationship.

c. Coefficient of Determination (R^2)

If the R^2 value is 0.75, 0.50, and 0.25, it can be concluded that the model is strong, moderate, and weak, respectively.

Table 6 R-square Coefficients

	R Square
Entrepreneurial Intentions_(Y)_	0.867
Digital marketing_(Z)_	0.766

The calculation results show that the entrepreneurial intention variable (Y) has an R-Square value of 0.867.

d. Testing the Effect of Size (f^2)

This study uses the *rule of thumb* developed by Hair et al. (2013) and Chin (1998), where values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. The calculation of f^2 is as follows:

Table 7 f^2 Results

	communication skills_(X2)_	Entrepreneurial Intentions_(Y)_	Digital Marketing_(Z)_	Entrepreneurship education_(X1)_
communication skills_(X2)_		2.530	0.643	
entrepreneurial intention_(Y)_				
digital marketing_(Z)_		0.001		
entrepreneurship education_(X1)		0.032	0.500	

The effect size (f^2) calculation results show the strength of each predictor variable's influence on the endogenous variable in the research model. First, communication skills (X2) have an f^2 value of 2.530 on entrepreneurial intention (Y).

3. Hypothesis Testing

This test uses *path coefficients*, with t-statistics values greater than the t-table (1.96) and p-values < 0.05 concluding that the hypothesis can be accepted, meaning that the direct effect is positive and significant between the variables tested.

Table 9 *Direct Effect and Indirect Effect*

	Relationship	B	T-value	P-values	Conclusion
H1	entrepreneurship education_(X1)_ -> entrepreneurial intention_(Y)_	0.277	6.488	0.000	<i>Significant</i>
H2	communication skills_(X2)_ -> entrepreneurial intention_(Y)_	1.023	19.945	0	<i>Significant</i>
H3	entrepreneurship education_(X1)_ -> digital marketing_(Z)_	0.475	8.813	0.000	<i>Significant</i>
H4	communication skills_(X2)_ -> digital marketing_(Z)_	0.446	8.117	0.000	<i>Significant</i>
H5	digital marketing_(Z)_ -> entrepreneurial intention_(Y)_	0.149	3.05	0.002	<i>Significant</i>
H6	entrepreneurship education_(X1)_ -> digital marketing_(Z)_ -> entrepreneurial intention_(Y)_	0.071	2.949	0.003	<i>Significant</i>
H7	communication skills_(X2)_ -> digital marketing_(Z)_ -> entrepreneurial intention_(Y)_	0.066	2.677	0.008	<i>Significant</i>

Based on Table 4.14, it is known that hypotheses 1 to 7 show t-statistics values greater than the t-table (1.96) and p-values < 0.05, so it can be concluded that hypotheses 1 to 7 are accepted and have a positive effect.

DISCUSSION

H1 – The Effect of Entrepreneurship Education on Entrepreneurial Intentions

A number of previous studies have consistently shown that entrepreneurship education is an important determinant in shaping entrepreneurial intent. Research by Zheng and Islam (2021), Diaz et al. (2024), Aragon-Sanchez et al. (2017), and El-Said and Aziz (2022) confirms that entrepreneurship education can increase self-efficacy, positive attitudes, and perceptions of entrepreneurial viability, thereby encouraging the emergence of entrepreneurial intent . Similar findings were also shown by Wardana et al. (2020), Purwana et al. (2021), and Fatoki (2014), who confirmed that a practice-based entrepreneurship curriculum that is relevant to the business world strengthens students' confidence in their ability to start their own business.

Overall, these studies support hypothesis H1 that entrepreneurship education has a positive effect on entrepreneurial intention.

H2 – The Effect of Communication Skills on Entrepreneurial Intentions

Previous studies also provide strong evidence that communication skills play a significant role in shaping entrepreneurial intent. Studies by Al Mamun et al. (2020), Tan and Lee (2021), Nguyen and Pham (2020), and Adeoye and Adeyemi (2020) show that effective interpersonal communication increases students' confidence and ability to manage business interactions, thereby strengthening entrepreneurial intent. Research by Faisal et al. (2022) and Mokoena & Dlamini (2023) emphasizes that vocational students with high communication skills tend to be better prepared to face market demands and are more confident in starting a business. Even Solvesvik (2017) found that communication increases self-efficacy, which ultimately influences entrepreneurial intention. Thus, all these findings consistently support hypothesis H2 that communication skills have a positive effect on entrepreneurial intention.

H3 – The Effect of Entrepreneurship Education on the Use of Digital Marketing

Empirical evidence also shows that entrepreneurship education not only influences intentions but also affects students' ability to utilize digital marketing. Research by Purwana et al. (2021), Raza et al. (2021), and Vejayaratnam et al. (2019) shows that an entrepreneurship curriculum integrated with digital tools and platforms can improve students' competence in implementing digital mediabased marketing strategies. Studies by Salam et al. (2021) and Makai & Dóry (2023) confirm that digital literacy acquired through formal education strengthens perceived behavioral control over technology use, thereby encouraging the use of digital marketing. The consistency of these findings supports hypothesis H3 that entrepreneurship education has a positive effect on the use of digital marketing.

H4 – The Influence of Communication Skills on the Utilization of Digital Marketing

A number of studies support the notion that communication skills contribute to the effectiveness of digital marketing. Hassan et al. (2021) found that good communication skills strengthen message delivery, customer relationships, and social media interactions, thereby increasing the effectiveness of digital marketing. Similar findings were demonstrated by Susanti et al. (2022) and Cai et al. (2022), who noted that individuals with high communication skills are better able to manage digital content and build online engagement. Further empirical support appears in the study by Rizwan et al. (2020), which shows that communication plays an important role in the success of digital marketing activities. Thus, these studies provide a strong foundation for hypothesis H4 that communication skills have a positive effect on the utilization of digital marketing.

H5 – The Influence of Digital Marketing on Entrepreneurial Intentions

Digital marketing has proven to be one of the key drivers of entrepreneurial intent. Studies by Husnah et al. (2023), Yilmaz and Erkan (2023), Santos and Oliveira (2022), and Al-Qahtani and Hassan (2022) show that the ability to utilize digital media increases perceptions of ease, opportunity, and business feasibility, thereby strengthening entrepreneurial intent. Similar findings are shown in the research by Gómez and Pérez (2022), Kim and Park (2021), and Islam et al. (2022), which found that the use of digital marketing strengthens self-efficacy and entrepreneurial motivation. Consistent evidence from various countries confirms hypothesis H5 that digital marketing has a positive effect on entrepreneurial intention.

H6 – Digital Marketing as a Mediator between Entrepreneurship Education and Entrepreneurial Intentions

The role of digital marketing mediation has been proven in various studies. Kurniawan et al. (2023) found that digital entrepreneurship education increases the use of digital marketing, which in turn encourages entrepreneurial intent. Research by Handayati et al. (2020), Raza et al. (2021), and Islam et al. (2022) shows that digital integration in entrepreneurship education strengthens perceptions of feasibility and self-efficacy in entrepreneurship. Even Dwivedi et al. (2021) and Wibowo & Suwanto (2024) emphasize that digital marketing provides a path for the actualization of competencies acquired through education. These findings support hypothesis H6 that digital marketing mediates the influence of entrepreneurship education on entrepreneurial intention.

H7 – Digital Marketing as a Mediator between Communication Skills and Entrepreneurial Intentions

Previous studies have also shown that digital marketing serves as a link between communication skills and entrepreneurial intent. Solvesvik (2017) and Rizwan et al. (2020) note that communication skills enhance self-efficacy and the quality of digital interactions, thereby strengthening the use of digital marketing strategies that impact entrepreneurial intent. Similar findings are shown in the study by Cai et al. (2022), which confirms that communication skills improve the success of digital marketing and ultimately encourage entrepreneurial intent. Overall, this empirical evidence supports hypothesis H7 that digital marketing mediates the influence of communication skills on entrepreneurial intent.

CONCLUSIONS AND RECOMMENDATIONS

This study confirms that the entrepreneurial intentions of vocational high school students majoring in Business and Management are significantly influenced by entrepreneurship education, communication skills, and digital marketing capabilities. Entrepreneurship education and communication skills have been proven to not only increase students' confidence in starting a business, but also encourage the use of digital marketing as a means of promotion and business development. Digital marketing plays an important mediating role in strengthening the influence of these two variables on entrepreneurial intent,

making digital literacy a central element in the development of students' entrepreneurial competencies. These findings emphasize the need to integrate entrepreneurship education with the strengthening of digital skills in order to foster a more adaptive entrepreneurial readiness in response to technological developments.

ADVANCED RESEARCH

Based on the findings of this study, schools and teachers need to strengthen practice-based entrepreneurship learning that integrates the use of digital marketing platforms so that students have direct experience in promoting and managing businesses digitally. Students are also encouraged to actively participate in entrepreneurship and digital marketing training through webinars, workshops, and online certifications to improve their personal competencies and entrepreneurial readiness.

For policymakers, policies are needed that integrate national entrepreneurship programs with the strengthening of digital literacy at the vocational school level, including the provision of supporting facilities such as mini studios for digital marketing content production. In addition, further research is expected to develop a more comprehensive model by adding other variables such as creativity, family support, or internship experience, as well as expanding the research object to other vocational school expertise programs to obtain stronger generalization of results.

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