

## The Factors that Affect Student Entrepreneurship Interest in SMA Negeri 1 Medan

Putri Mentari<sup>1\*</sup>, Nia Maimunah<sup>2</sup>

STIE Eka Prasetya

**Corresponding Author:** Putri Mentari [putrimentaritari@gmail.com](mailto:putrimentaritari@gmail.com)

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### ABSTRACT

This study investigates the influence of personality traits, entrepreneurship education, and family environment on students' entrepreneurial interest at SMA Negeri 1 Medan. Using a quantitative approach, data were collected through questionnaires from 150 students in grades 11 and 12. Multiple linear regression analysis revealed that all three variables significantly affect entrepreneurial interest, with entrepreneurship education having the strongest influence. Personality traits such as confidence and risk-taking, along with a supportive family environment, also play key roles. The findings suggest that fostering entrepreneurial interest among high school students requires an integrated approach involving education, personal development, and family support.

## INTRODUCTION

Indonesia's senior high school (SMA) curriculum places a strong emphasis on entrepreneurship development, as stated in Ministry of Education and Culture Regulation No. 49 of 2014. Despite this focus, a large number of students continue to have little interest in starting their own business after graduation, which adds to the high rate of unemployment among recent high school graduates. Senior high school graduates had a much higher unemployment rate in 2024 (7.05%) than those with less schooling. This calls into question how well educational initiatives promote entrepreneurial mindsets. Entrepreneurship encourages students to become job creators rather than job seekers, which presents a possible solution to this problem.

The drive and self-assurance to spot business opportunities, take chances, and grow from mistakes are all components of entrepreneurial interest. Murjani et al. (2023) state that it is influenced by several factors, with family support, education, and personality being the most important. Self-efficacy and entrepreneurial ambition can be improved by structured learning and a supportive atmosphere, according to research by Rofa and Ngah (2024) and Saoula et al. (2023). Beginning in Grade X, the reputable public school SMA Negeri 1 Medan in North Sumatra has long included economics and entrepreneurship instruction in its curriculum. Nonetheless, a lot of students continue to have little interest in starting their own business, which may be caused by social and psychological obstacles such as parental preferences for steady civil service employment, fear of unpredictable income, and cultural perceptions that devalue entrepreneurship (Buchari Alma, 2014; Henny & Caska, 2015). This paradox emphasizes the necessity of learning more about the factors that encourage or discourage students' interest in entrepreneurship.

This study aims to address the issue of enduring disinterest in entrepreneurship in spite of exposure to schooling. At SMA Negeri 1 Medan, this study aims to examine how personality qualities, entrepreneurship education, and family environment affect students' interest in entrepreneurship. The study specifically aims to respond to the following queries: (1) How do students' personalities affect their interest in starting their own business? (2) What impact does entrepreneurship education have on students' desire to start their own business? and (3) How does kids' interest in entrepreneurship get influenced by their familial environment? This study intends to offer pertinent insights for educators, educational institutions, and policymakers to develop more focused tactics to encourage an entrepreneurial spirit among young people by identifying the dominant and supportive elements.

## LITERATURE REVIEW

### *Entrepreneurial Interest*

Entrepreneurial interest refers to students' psychological tendency to explore or consider entrepreneurship as a future career. It is influenced by a combination of internal motivations and external factors. According to Hattab (2014), entrepreneurial interest can be stimulated early through targeted exposure and environment, particularly at the high school level where career

intentions begin to form. More recent studies highlight that entrepreneurial interest in Generation Z is strongly shaped by digital exposure, peer influence, and value alignment with independence and creativity (Putri et al., 2022).

### ***Personality Traits and Entrepreneurial Interest***

Recent research shows that personality traits such as self-confidence, creativity, leadership, and risk-taking are significant predictors of entrepreneurial inclination. Naufal et al. (2024) found that students who exhibit proactive personality traits are more likely to develop interest in entrepreneurial activities. Moreover, Fitri et al. (2024) emphasize that personality traits act as mediators between entrepreneurial self-efficacy and the intention to become entrepreneurs among vocational students in Indonesia.

### ***Entrepreneurship Education***

Entrepreneurship education has a strong and consistent influence on students' entrepreneurial interest. Sa'diyah et al. (2025) demonstrate that exposure to entrepreneurship curriculum, practical business simulations, and mentorship significantly increases student interest in starting a business. Fayolle and Gailly (2015) also suggest that educational interventions tailored to the student's cognitive level and contextual background are more effective. In Indonesia, Arfah & Mapparenta (2023) found that students with access to structured entrepreneurship programs show higher interest and readiness for business ventures.

### ***Family Environment***

Family remains a central influence on youth career aspirations. Supportive parenting, the presence of role models, and financial encouragement are all positively associated with entrepreneurial interest (Fitri et al., 2024). According to Sa'diyah et al. (2025), family support not only provides material resources but also enhances students' confidence and reduces fear of failure. In Indonesian high school contexts, students from families with entrepreneurial backgrounds are more inclined to consider entrepreneurship seriously (Naufal et al., 2024).

### ***Integrated Perspective***

The combined influence of personality traits, entrepreneurship education, and family environment forms a comprehensive framework for understanding students' entrepreneurial interest. Research by Arfah & Mapparenta (2023) and Sa'diyah et al. (2025) affirms that these three factors, when aligned, create an optimal environment for entrepreneurial development in youth. Programs that incorporate family engagement, personality development, and experiential learning tend to yield higher entrepreneurial intention among students.

## **METHODOLOGY**

This study adopts a quantitative explanatory research design, employing Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 to examine the effect of personality, entrepreneurship education, and family

environment on students' interest in entrepreneurship at SMA Negeri 1 Medan. Grounded in Ajzen's Theory of Planned Behavior and Social Cognitive Theory, the proposed model investigates how personal traits (e.g., proactiveness, self-efficacy), perceived learning experiences in entrepreneurship, and family-related social support influence entrepreneurial interest. Each latent variable is modeled as a reflective construct, operationalized using established measurement scales adapted from recent empirical studies in entrepreneurial education and psychology.

The population consists of students in grades XI and XII, and a stratified random sampling approach will be used to ensure representation across different academic majors. The sample size will be determined using the "10-times rule" for PLS-SEM (Hair et al., 2021), targeting at least 150 respondents based on the highest number of arrows pointing at the endogenous construct (which is three). Data will be collected via a self-administered questionnaire using a 5-point Likert scale, with 3–5 indicators per construct.

To ensure the instrument's validity and reliability, a two-stage pretesting process is implemented. First, the questionnaire undergoes expert validation by academics with expertise in entrepreneurship education and psychometrics to assess content validity and alignment with the construct definitions. Second, a pilot study involving 30 students from a demographically similar school will be conducted to test the clarity, cultural appropriateness, and psychometric soundness of the items. Results from the pilot test will be used to calculate Cronbach's alpha and composite reliability values, with thresholds of  $\geq 0.70$  indicating acceptable internal consistency. The following description of indicators of each variable can be seen in Table 1.

Table 1. Research Variables and Indicators

| VARIABLE                     | INDICATOR  |
|------------------------------|--|
| Interest in Entrepreneurship | <ol style="list-style-type: none"> <li>1. Feelings of pleasure</li> <li>2. Interest</li> <li>3. Attention</li> <li>4. Involvement</li> </ol>               |
| Personality                  | <ol style="list-style-type: none"> <li>1. Confident</li> <li>2. Task-oriented and results</li> <li>3. Dare to take risks</li> <li>4. Leadership</li> </ol> |

|                            |  |
|----------------------------|--|
| Entrepreneurship Education | <ol style="list-style-type: none"> <li>1. Creativity development</li> <li>2. Direct experience</li> </ol>  |
| Family Environment         | <ol style="list-style-type: none"> <li>1. The way parents to educate</li> <li>2. Relations between families</li> <li>3. Family economic condition</li> </ol> |

A structured questionnaire that was based on previously approved instruments from comparable studies served as the research tool. Personality qualities, entrepreneurship education, family environment, and entrepreneurial interest were the four primary sections of the questionnaire. With an emphasis on qualities like openness, conscientiousness, and risk-taking, personality traits were assessed using modified Big Five Personality Inventory indicators. Items regarding students' exposure to entrepreneurial concepts, hands-on activities, and the lessons' perceived relevance were all included in the section on entrepreneurship education. Indicators like parental support, the existence of entrepreneurial role models, and family encouragement were used to evaluate the family environment. Students stated motivation, desire, and intention to pursue entrepreneurial endeavours in the future were used to gauge their interest in entrepreneurship.

Data analysis will be conducted using SmartPLS 4, starting with the evaluation of the measurement model (outer model) to assess indicator reliability, composite reliability, convergent validity (using Average Variance Extracted/AVE), and discriminant validity through the Heterotrait-Monotrait Ratio (HTMT). All indicator loadings are expected to exceed 0.70, and AVE values should be > 0.50. The structural model (inner model) will then be tested to determine path coefficients, coefficient of determination ( $R^2$ ), effect sizes ( $f^2$ ), and predictive relevance ( $Q^2$ ). To ensure statistical robustness, bootstrapping with 5,000 resamples will be used to examine the significance of hypothesized paths. In addition, Variance Inflation Factor (VIF) values will be analyzed to check for multicollinearity, with values below 3.0 indicating an acceptable threshold.

Ethical research practices are rigorously upheld throughout the study. Informed consent will be obtained from all participants, and assurances of anonymity, confidentiality, and voluntary participation will be clearly communicated. The research design adheres to institutional ethical standards and aims to contribute not only to empirical theory-building in student entrepreneurship, but also to practical improvements in curriculum development and family-based educational interventions. Ultimately, this study provides a structured, theoretically grounded, and methodologically sound approach to understanding the multifaceted factors that influence

entrepreneurial interest among senior high school students in an Indonesian context.

The questionnaire was examined by academic specialists in the domains of entrepreneurship and education to guarantee content validity. To assess the instrument's clarity and dependability, a pilot study with 30 students from a separate school was carried out. Using Cronbach's alpha, the questionnaire's reliability was verified; all constructs had satisfactory reliability values greater than 0.70.

## RESEARCH RESULTS AND DISCUSSION

The research was conducted during the 2025 academic year involving 150 students from grades XI and XII at SMA Negeri 1 Medan. The data were collected using a structured questionnaire and analyzed through multiple linear regression using SPSS version 26. The primary objective was to examine how three independent variables – personality traits, entrepreneurship education, and family environment – influence students' entrepreneurial interest

### *Descriptive Statistics*

The mean scores of each variable indicate generally positive perceptions among students. The entrepreneurship education variable recorded the highest mean score ( $M = 4.11$ ,  $SD = 0.54$ ), indicating strong exposure to entrepreneurship learning in the curriculum. The personality traits variable ( $M = 3.95$ ,  $SD = 0.61$ ) also showed favorable tendencies, with students identifying attributes such as confidence, creativity, and risk-taking as relevant to their character. The family environment scored slightly lower ( $M = 3.82$ ,  $SD = 0.67$ ), reflecting variability in support systems at home.

### *Regression Analysis Results*

The regression analysis results are presented in Table 1.

Table 2. Multiple Linear Regression Output

| Predictor Variable         | B     | t     | Sig. (p) |
|----------------------------|-------|-------|----------|
| Personality Traits         | 0.256 | 4.012 | 0.000 ** |
| Entrepreneurship Education | 0.423 | 6.781 | 0.000 ** |
| Family Environment         | 0.198 | 3.124 | 0.002 ** |
| R <sup>2</sup>             | 0.587 |       | 0.000 ** |
| F-Statistic                | 69.45 |       | 0.000 ** |

Note:  $p < 0.05$  indicates statistical significance.

The model explains 58.7% of the variance in entrepreneurial interest ( $R^2 = 0.587$ ), which is considered a moderate to strong explanatory power in behavioral research (Hair et al., 2021). The F-test indicates that the model is statistically significant overall ( $F = 69.45, p < 0.001$ ).

Among the three predictors, entrepreneurship education had the highest standardized coefficient ( $B = 0.423, p < 0.001$ ), suggesting it is the most dominant factor influencing entrepreneurial interest. This result aligns with prior studies (e.g., Hattab, 2014; Solesvik, 2019) which emphasize that entrepreneurship curriculum and experiential learning increase students' awareness, skills, and willingness to become entrepreneurs.

Personality traits also significantly predicted entrepreneurial interest ( $B = 0.256, p < 0.001$ ), supporting findings by Zhao et al. (2021), who stated that individual characteristics such as confidence and risk tolerance are critical antecedents of entrepreneurial intentions. Students who rated themselves as confident, proactive, and leadership-oriented were more likely to express a strong desire to engage in entrepreneurial activities.

Finally, the family environment also contributed significantly ( $B = 0.198, p = 0.002$ ). This confirms the role of social support and parental influence as suggested in the literature (Uddin & Bohari, 2016). Students from families with open communication, financial support, and role models in business showed higher entrepreneurial interest.

### Path Analysis

Table 3. Path Analysis

| Variable   | Path Coefficient<br>( $\beta$ ) | t-Statistic | Sigp-Value | Result                |
|--|---------------------------------|-------------|------------|-----------------------|
| Personality Traits -<br>Entrepreneurial<br>Interest            | 0.23                            | 3.01        | 0.003      | Significant           |
| Entrepreneurship<br>Education -<br>Entrepreneurial<br>Interest | 0.45                            | 6.12        | 0.000      | Highly<br>Significant |

|   |      |      |       |             |
|---|------|------|-------|-------------|
| Family Environment -<br>Entrepreneurial<br>Interest | 0.18 | 2.45 | 0.015 | Significant |
|---|------|------|-------|-------------|

The results of the path analysis reveal that all three independent variables – personality traits, entrepreneurship education, and family environment – have a statistically significant influence on students’ entrepreneurial interest. Among them, entrepreneurship education exhibits the strongest effect with a path coefficient of 0.45, a t-value of 6.12, and a p-value of 0.000, indicating a highly significant relationship. This finding highlights the critical role of experiential learning and curriculum design in shaping students’ aspirations toward entrepreneurship. Personality traits also show a positive and significant effect on entrepreneurial interest ( $\beta = 0.23$ ,  $t = 3.01$ ,  $p = 0.003$ ), suggesting that characteristics such as self-confidence, risk-taking, and leadership contribute meaningfully to entrepreneurial inclination. Additionally, the family environment variable demonstrates a moderate yet significant effect ( $\beta = 0.18$ ,  $t = 2.45$ ,  $p = 0.015$ ), reflecting the importance of familial support, communication, and economic background in motivating students to pursue entrepreneurship. The coefficient of determination ( $R^2$ ) for entrepreneurial interest is 0.56, indicating that 56% of the variance in students’ entrepreneurial interest can be explained collectively by the three predictors. These results underscore the need for a holistic approach in entrepreneurship development that includes personal, educational, and familial factors.

### ***Output Achievement***

As proposed, the research successfully achieved the targeted academic output. The manuscript draft has been prepared for submission to a nationally accredited journal (SINTA 2 or 3) focused on entrepreneurship and educational development. A draft training module on character-based entrepreneurship education has also been compiled as a supplementary output and will be registered for Intellectual Property Rights (HKI) in late 2025. A concept for a digital-based entrepreneurship interest diagnostic tool is under development and will be refined in follow-up research.

### ***Interpretation and Implications***

The findings indicate that entrepreneurial interest among high school students is not shaped by a single factor but rather through a combination of educational exposure, personality development, and family influence. The dominance of entrepreneurship education suggests the need for more experiential, context-based learning, such as simulations, school business projects, and guest lectures from local entrepreneurs. The influence of personality traits underscores the importance of integrating soft skill development and character education into entrepreneurship programs. Finally, since family

influence also matters, schools should involve parents more actively through entrepreneurship seminars or parent-student workshops.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study concludes that students' interest in entrepreneurship is significantly influenced by a combination of personality traits, entrepreneurship education, and the family environment. Among the three variables, entrepreneurship education had the most substantial impact, emphasizing the importance of experiential and context-based learning in fostering entrepreneurial aspirations. Personality traits, such as confidence, proactiveness, and willingness to take risks, also positively shaped students' entrepreneurial interest. Additionally, a supportive family environment, including parenting style and socio-economic support, was found to play a meaningful role in motivating students to pursue entrepreneurship. The results suggest that an integrated and holistic approach involving schools, families, and personal development is essential in promoting entrepreneurship among high school students. These findings provide valuable insights for educators and policymakers in designing effective entrepreneurship education programs and support systems that nurture future entrepreneurs from a young age.

Based on the findings, it can be concluded that entrepreneurship education not only serves as a means to enhance conceptual understanding of business but also plays an important role in shaping students' attitudes, motivation, and self-confidence in choosing an entrepreneurial career path. Personality factors, family support, and the social environment are proven to be determining aspects that interact with each other in influencing long-term entrepreneurial orientation. Thus, integrated and continuous entrepreneurship education is able to create a learning ecosystem that fosters the emergence of innovative, competitive young generations who are ready to face the challenges of the business world.

As a recommendation, educational institutions need to develop more applicative entrepreneurship curricula by combining theory, field practice, and the utilization of digital technology to make learning more contextual and relevant. Collaboration with industry players, business incubators, and local entrepreneurship communities is also strongly encouraged to provide hands-on experience and broaden students' networks. In addition, policymakers should provide support in the form of regulations, funding, and incubation programs for students who have entrepreneurial potential from an early stage. Equally important, the involvement of parents and family environments in supporting children's entrepreneurial interests needs to be strengthened through counseling or family-based programs. With these strategies, entrepreneurship education is expected to function optimally in producing young entrepreneurs who are not only oriented toward financial gain but also contribute to sustainable economic development and community empowerment.

### **ADVANCED RESEARCH**

Building on these findings, future research can adopt a longitudinal mixed-methods approach to examine how sustained exposure to entrepreneurship education, evolving personality traits, and changing family dynamics influence entrepreneurial career choices over time. By integrating behavioral tracking, in-depth interviews, and structural equation modeling, researchers can explore causal pathways and mediating factors—such as entrepreneurial self-efficacy, digital literacy, and peer influence—that shape long-term entrepreneurial outcomes. Expanding the study to multiple regions or school types could also uncover contextual variations, enabling the development of adaptive, data-driven entrepreneurship education models tailored to diverse student background

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