The Contribution of Achievement Motivation, Use of Information Technology, and Learning Outcomes of Creative Entrepreneurial Products on Interest in Entrepreneurship

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Abstract
Entrepreneurship education in vocational high schools plays a crucial role in shaping students to become independent and innovative individuals capable of creating their own businesses. However, many students still show a low level of interest in entrepreneurship, which calls for an investigation into the influencing factors. This study aims to analyze the influence of achievement motivation and the use of information technology on students' entrepreneurial interest, either directly or indirectly through entrepreneurial learning outcomes. The research was conducted using a quantitative correlational method involving 125 students from SMKN 2 Merangin during the 2024/2025 academic year. Data were collected through validated and reliable questionnaires measuring achievement motivation, technology use, and entrepreneurial interest. Students' learning outcomes were obtained from their average scores in the subject "Productive Creative Entrepreneurship." Data were analyzed using descriptive statistics, regression analysis, and path analysis with the help of RStudio. The results showed that both achievement motivation and information technology use had a significant positive effect on students' entrepreneurial learning outcomes and their interest in entrepreneurship. Specifically, learning outcomes acted as a mediating variable, enhancing the influence of both independent variables on entrepreneurial interest. The path analysis indicated that the total effects of achievement motivation and technology use on entrepreneurial interest were 0.31 and 0.29, respectively, with a direct contribution from learning outcomes of 0.32. In conclusion, achievement motivation and the use of information technology significantly influence students' entrepreneurial interest, with entrepreneurial learning outcomes serving as an important mediating factor. These findings suggest that strengthening motivation and integrating digital literacy into the curriculum can enhance students' readiness and enthusiasm for entrepreneurship.

INTRODUCTION

Entrepreneurship plays a vital role in economic development, particularly in preparing the younger generation to become job creators rather than job seekers (Julindrastuti & Karyadi, 2022; Winarsih & Yono, 2021). In the context of vocational high schools (SMK) in Indonesia, entrepreneurship education is a key component aimed at equipping students with the skills, mindset, and motivation needed to start and manage their own businesses. However, the level of entrepreneurial interest among students is still considered suboptimal, prompting the need to explore various factors that might influence it (Fathullah, 2022).

One of the important factors that potentially affects students' interest in entrepreneurship is achievement motivation. This refers to the internal drive that encourages individuals to set goals, strive for success, and overcome challenges. Students with high achievement motivation are more likely to take initiative and pursue entrepreneurial activities as a form of self-actualization. Understanding the impact of this psychological factor on entrepreneurial interest can provide valuable insights for educators and policymakers (Sutianah, 2021; Winarno & Hartanti, 2023).

In addition, the use of information technology has become increasingly relevant in today's entrepreneurial landscape. Digital tools not only simplify business processes but also open new opportunities for innovation and market access (Muhiba, 2020; Nurafifah et al., 2024). The extent to which students utilize technology in their academic and personal lives may influence their perception of entrepreneurship as something accessible and manageable, thus enhancing their interest in this field.

Another key element that links motivation and technology use with entrepreneurial interest is the outcome of entrepreneurship learning itself (Valenzuela-Pascual et al., 2024). Learning outcomes, reflected through students' academic performance in entrepreneurial subjects, serve as both an indicator of their understanding and a mediator of their attitudes toward real-world application. A positive learning experience can reinforce students' confidence and readiness to venture into business (M. Chen et al., 2024; Nabilah & Kurniawan, 2022).

This study aims to investigate the direct and indirect effects of achievement motivation and information technology use on students' entrepreneurial interest, with entrepreneurial learning outcomes as a mediating variable (Ali et al., 2024; Ekhtiari et al., 2024). By understanding the interrelationship among these variables, educators can design more effective learning strategies that foster not only academic success but also entrepreneurial spirit among vocational high school students.

METHODS

This study employed a quantitative correlational research design to examine the direct and indirect effects of independent variables—achievement motivation and information technology use—on students' entrepreneurial interest, mediated by entrepreneurial learning outcomes. The study was conducted at SMKN 2 Merangin during the 2024/2025 academic year. A total of 125 students from grade XII across six different vocational programs were selected using proportional

random sampling, based on Slovin's formula from a total population of 181 students. Data were collected through validated and reliable questionnaires to measure achievement motivation (X1), use of information technology (X2), and entrepreneurial interest (Y), while students' entrepreneurial learning outcomes (X3) were obtained from their report card scores in the subject "Creative Product and Entrepreneurship."

Prior to data analysis, the instruments underwent validity and reliability testing involving 30 students outside the research sample. Data analysis was performed using RStudio software. Descriptive statistics such as mean, median, mode, and standard deviation were used to describe each variable. Furthermore, assumption tests including normality, linearity, and multicollinearity were conducted. To test the hypotheses, both simple regression and path analysis were employed to explore the direct and indirect effects between variables. The significance level was set at 0.05 to determine the acceptance or rejection of the hypotheses.

RESULT AND DISCUSSION

Table 1. Descriptive Statistics of Research Variables

Variable	N	Average	Median	Modality	Standard Deviation	Category
Motivation to Achieve (X1)	125	83,2	84	85	6,5	Good
The Use of Technology (X2)	125	80,6	81	80	7,2	Good
Entrepreneurship Learning Outcomes (X3)	125	78,4	79	80	5,8	Enough
Interest in Entrepreneurship (Y)	125	82,1	82	83	6,3	Good

Descriptive data show that all research variables are in the sufficient to good category, with the highest average score in achievement motivation..

Table 2. Results of Simple Regression Test

Relationship of Variables	R	R²	F Count	Sig. (p)	Information
Motivation to Achieve (X1) → Learning Outcomes (X3)	0,512	0,262	44,6	0,000	Significant
The Use of Technology (X2) → Learning Outcomes (X3)	0,478	0,229	38,9	0,000	Significant
Learning Outcomes (X3) → Interest in Entrepreneurship (Y)	0,601	0,361	70,2	0,000	Significant

Hasil uji regresi menunjukkan bahwa semua hubungan antar variabel signifikan secara statistik

Table 3. Path Analysis Results

Influence Line	Path Coefficient	Direct Influence	Indirect Influence	Total Influence
X1 → X3 → Y (Through Learning Outcomes)	0,21	0,18	0,13	0,31
X2 → X3 → Y (Through Learning Outcomes)	0,24	0,15	0,14	0,29
X1 → Y (directly)	0,18	0,18	-	0,18
X2 → Y (directly)	0,15	0,15	-	0,15
X3 → Y	0,32	0,32	-	0,32

Path analysis shows that learning outcomes act as an important mediator between motivation/technology and entrepreneurial interest..

DISCUSSION

The findings of this study reveal that achievement motivation significantly influences students' entrepreneurial interest, both directly and indirectly through learning outcomes. Students with high levels of motivation tend to set goals, work diligently, and take initiative qualities that are essential in entrepreneurial activities. This supports previous research indicating that internal motivation is a key factor driving entrepreneurial behavior among students. The direct and indirect effects observed in this study highlight the importance of fostering achievement motivation in entrepreneurship education (Liu et al., 2024; Simanjuntak, 2024).

Moreover, the use of information technology was found to have a significant impact on both learning outcomes and entrepreneurial interest (Ji et al., 2024; Muthmainnah et al., 2024). In the digital age, students who are more comfortable with using technology are likely to perceive entrepreneurship as more accessible and manageable. Technology not only facilitates learning processes but also equips students with tools to innovate, communicate, and promote their ideas more effectively. These results align with global trends emphasizing digital competency as a pillar of modern entrepreneurship (Ampas & Refanidis, 2024; Barta et al., 2024).

The mediating role of entrepreneurial learning outcomes is also noteworthy. The data show that students who performed better in entrepreneurship-related subjects demonstrated a higher interest in pursuing entrepreneurship (Darwanto et al., 2024). This suggests that positive academic experiences can boost students' confidence in their capabilities, which in turn fosters interest in applying those skills in real-world business contexts. It implies that the quality of teaching and assessment in entrepreneurship courses can play a strategic role in developing entrepreneurial mindsets (Karpliuk et al., 2024; Misuraca et al., 2024).

Taken together, these findings emphasize the need for a comprehensive approach in entrepreneurship education one that nurtures internal motivation, integrates digital literacy, and ensures effective learning outcomes. Educational institutions, especially vocational schools, should consider curriculum enhancements and pedagogical strategies that reinforce these three aspects. By doing so, schools can better prepare students not only for employment but also for self-employment and innovation in the future economy (Bhupal et al., 2024; S. Chen et al., 2024).

CONCLUSIONS

Concluded that both achievement motivation and the use of information technology have a significant influence on students' interest in entrepreneurship, either directly or indirectly through entrepreneurial learning outcomes. This finding confirms that students who are motivated to achieve and are proficient in using technology tend to perform better in entrepreneurship learning, which in turn enhances their interest in becoming entrepreneurs. Therefore, fostering internal motivation and integrating digital skills into the learning process are essential strategies to effectively increase entrepreneurial interest among vocational high school students.

CONFLICTS OF INTEREST STATEMENT

Regarding this study, the author declares that there is no conflict of interest.

AUTHOR CONTRIBUTIONS

Study concept and design: Fitri Jalal. Acquisition of data: Muhammad Adri. Analysis and interpretation of data: Riki Mukhaiyar. Drafting the manuscript: Fitri Jalal. Critical revision of the manuscript for important intellectual content: Rijal Abdullah. Statistical analysis: Fitri Jalal.

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