



The Role of Entrepreneurship Education, *Artificial Intelligence* , And Family Support on The Entrepreneurial Intention of Students of State Senior High School 1 Surakarta

Synta Febriani^{1*}, Dewi Kusuma Wardani²

Sebelas Maret University

Email: synta.febriani@student.uns.ac.id^{1*}, dewikusuma@staff.uns.ac.id²

ABSTRACT

The era of globalization requires high school graduates to excel not only academically but also in entrepreneurship. The high unemployment rate among senior high school graduates highlights the importance of entrepreneurship education in fostering entrepreneurial intention from an early stage. This study aims to analyze the influence of entrepreneurship education, the utilization of Artificial Intelligence (AI), and family support on the entrepreneurial intention of students at SMA Negeri 1 Surakarta, both partially and simultaneously. This research employed a quantitative descriptive approach involving 192 students selected through probability sampling. Data were collected using a questionnaire distributed via Google Form. The instruments were tested for validity and reliability and met classical assumption tests, including normality, linearity, multicollinearity, and heteroscedasticity. Data analysis was conducted using multiple linear regression, t-test, F-test, and coefficient of determination. The results indicate that entrepreneurship education, the utilization of AI, and family support each have a positive and significant effect on students' entrepreneurial intention. Simultaneously, the three variables also show a significant influence, with an R² value of 0.655, meaning that 65.5% of the variance in entrepreneurial intention can be explained by the model. These findings emphasize the importance of collaboration among schools, families, and technology in fostering students' entrepreneurial mindset in the digital era.

Keywords: *entrepreneurship education, artificial intelligence , family support, entrepreneurial intention.*

Introduction

Developing countries, including Indonesia, still face unemployment and poverty, which impact low economic growth and social welfare (Mufida & Nasir, 2021). Rigorous job selection processes and the lack of guarantees regarding the relevance of educational degrees to jobs mean that many graduates find themselves in unrelated jobs or even unemployed (Dewi, 2017). Statistics Indonesia (BPS) data from February 2025 recorded 7.27 million unemployed people with a TPT of 4.76%, while available jobs were only around 630,672 positions, indicating a serious imbalance between the workforce and job opportunities.

High school graduates are generally prepared for higher education, but economic constraints and career planning constraints force some to enter the workforce without adequate skills. This situation triggers *an education-job mismatch*, a mismatch between education and labor market needs (Allen & Velden, 2011). The ILO (2020) also confirms that youth unemployment is largely caused by skills mismatches and limited job opportunities.

The unemployment rate for high school graduates ranks second only to vocational high school graduates, at 7.05% in February 2025 (BPS). This indicates that high school graduates still face significant challenges entering the workforce. Therefore, high school education should not only focus on continuing their studies but also foster an entrepreneurial spirit and intention so that students can create their own jobs. Entrepreneurship plays a crucial role in driving economic growth through innovation and job creation, as well as improving community welfare (Sucarita, 2023).

Changes to the Indonesian education system aim to improve the quality of human resources through innovation and a relevant curriculum (Salahudin et al., 2018). An appropriate curriculum is expected to foster students' entrepreneurial spirit (Iwu et al., 2019). However, research findings are mixed. Several studies have found a significant correlation between entrepreneurship education and entrepreneurial intentions, albeit relatively small (Dinis, 2024; Hartono et al., 2022; Yanti, 2019), while Bae et al. (2014) stated that the relationship was insignificant after considering initial intentions. This suggests that entrepreneurial intentions are also influenced by factors other than entrepreneurship education.

The development of *Artificial Intelligence* (AI) has brought significant changes to the business world, particularly in decision-making, market trend analysis, marketing strategies, and operational automation, such as inventory management and customer service. The use of AI increases the effectiveness and competitiveness of business actors, including aspiring young entrepreneurs (Forliano et al., 2021). In the educational context, AI is utilized by students to

identify business opportunities, develop ideas, and support decision-making, potentially influencing entrepreneurial motivation and readiness. In response to these dynamics, the Independent Curriculum (Curriculum Merdeka), launched by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), has begun integrating digital literacy, programming (coding), and the use of AI through Informatics subjects at the junior high and senior high/vocational high school levels. AI education in schools is expected to not only prepare students for the workforce but also foster computational thinking, creativity, and problem-solving skills, and open up technology-based entrepreneurial opportunities, so that students are not entirely dependent on the increasingly limited formal employment market.

Several studies have demonstrated the positive influence of AI on entrepreneurship. Fakhri et al. (2024) found that the introduction of AI in learning encourages the development of students' entrepreneurial spirit. Rusmana (2020) demonstrated that mastery of digital skills significantly contributes to the effectiveness of personal entrepreneurship with a positive correlation value ranging from 45.1% to 86.6%. While Herawati and Hardiansyah (2025) emphasized that the use of AI influences the entrepreneurial interest of Generation Z. However, entrepreneurial intentions are influenced not only by technology but also by family support. Moral and material support increase self-confidence and the courage to start a business (Tentama & Paputungan, 2019). Trisnawati (2019) also demonstrated that family social support significantly influences students' entrepreneurial interest.

Entrepreneurship development is a crucial aspect for both the general public and high school (SMA) and vocational high school (SMK) students. This is due to the fact that students face two choices after completing formal education: continuing their studies or working (Nurhadifah & Sukanti, 2018). Embracing an entrepreneurial spirit among high school students is still considered difficult because the education they receive does not necessarily prepare them mentally for entering the business world. The disparity in work experience between high school and vocational high school graduates is a structural issue in the Indonesian education system. This disparity arises from fundamental differences in the curricula of both levels. According to Wijaya and Utami (2021), 77.9% of vocational high school graduates work in their fields of expertise. Vocational high schools emphasize vocational orientation and industrial work experience, while high schools focus more on general academics without direct training for the workplace. Research by Fitramadhana (2024) noted that high school graduates often lack specialized experience or work experience, thus experiencing adaptation difficulties and facing high unemployment.

According to *the Theory of Planned Behavior* (TPB), entrepreneurial intentions are influenced by attitudes, subjective norms, and perceived behavioral control. Entrepreneurship education shapes students' positive attitudes toward the business world, while the use of AI increases self-confidence and perceived ability to start a business. Family economic conditions reflect environmental support that influences students' confidence in entrepreneurship. Theoretically, these three factors play a role in shaping students' entrepreneurial intentions as a response to limited employment opportunities.

The persistently high unemployment rate among high school graduates indicates that education at this level has not fully fostered entrepreneurial intentions as an alternative to limited formal employment opportunities. Although entrepreneurship education has been integrated into the curriculum, particularly through craft subjects, research shows that its influence on students' entrepreneurial intentions remains variable and inconsistent.

Meanwhile, the rapid development of AI opens up new opportunities in digital entrepreneurship, but its use in the context of high school education and its role in shaping entrepreneurial intentions are still rarely studied empirically. Furthermore, family support is also a crucial factor that can strengthen students' motivation, self-confidence, and courage to become entrepreneurs. Therefore, this study seeks to analyze the influence of entrepreneurship education, AI utilization, and family support on high school students' entrepreneurial intentions.

Based on these research gaps, it can be concluded that there is still a research gap regarding strengthening the relationship between entrepreneurship education and entrepreneurial intentions, particularly through the use of AI and family support as supporting factors. Previous research has not yet integrated these three variables into a comprehensive analytical framework, particularly in the context of high school students who have limited practical experience compared to vocational high school students. Therefore, research that simultaneously examines the role of AI and family support in strengthening the effectiveness of entrepreneurship education in the digital era is relevant. This research is novel because it combines three factors: entrepreneurship education, AI, and family support, which have not been widely studied simultaneously. Furthermore, this research contributes to the development of character- and technology-oriented education policies and provides a new approach to fostering an entrepreneurial spirit at the secondary school level.

Research Methods

The research was conducted at SMA Negeri 1 Surakarta on grade X students in the 2024/2025 academic year. This school was chosen because it has

implemented Crafts and Entrepreneurship subjects, and has diverse student family backgrounds, making it relevant to analyze the influence of entrepreneurship education, AI utilization, and family support on entrepreneurial intentions.

The study used a descriptive quantitative approach with a *probability sampling technique* through *simple random sampling*. The population was 369 10th-grade students, and based on the Slovin formula, a sample of 192 students was obtained. The independent variables included entrepreneurship education (X1), utilization of *Artificial Intelligence* (X2), and family support (X3), while the dependent variable was entrepreneurial intention (Y).

The data used were primary data collected through a *Google Form -based questionnaire* with a *Likert scale* . The instrument was modified from previous research and tested for validity using *product moment* and reliability using *Cronbach’s Alpha* , with all variables declared valid and reliable.

Validity testing was conducted to ensure each questionnaire item accurately measured the variable. The test used *Product Moment correlation* , with validity criteria if the calculated $r > r$ table (0.361) and $sig. < 0.05$. All items in each variable were declared valid. A summary of the validity test results is presented below.

Table 1. Validity Test

Variables	Number of Items	Range of r count	r table	Sig.	Criteria
Entrepreneurship Education (X1)	6	0.937–0.963	0.361	0,00	Valid
Utilization of Artificial Intelligence (X2)	6	0.915–0.949	0.361	0,00	Valid
Family Support (X3)	8	0.922–0.955	0.361	0,00	Valid
Entrepreneurial Intention (Y)	6	0.813–0.884	0.361	0,00	Valid

r values above the table r , thus meeting the validity criteria. Reliability testing used *Cronbach’s Alpha* with a limit of ≥ 0.60 . All variables were declared reliable because the alpha value was above the minimum limit.

Table 2. Reliability Test

Variables	Number of Items	Cronbach's Alpha	Criteria
Entrepreneurship Education	6	0.978	Reliable
Utilization of Artificial Intelligence	6	0.969	Reliable
Family Support	8	0.981	Reliable
Entrepreneurial Intention	6	0.926	Reliable

Thus, all research instruments have met the validity and reliability requirements for use in data analysis using SPSS 26, including descriptive analysis, classical assumption tests (normality, linearity, multicollinearity, and heteroscedasticity), and hypothesis testing using multiple linear regression, t-test, F-test, and coefficient of determination (R^2). The research stages include preparation, data collection, data processing, and conclusion drawing.

Results And Discussion

Data Description

The purpose of this study was to analyze the influence of entrepreneurship education, the use of *artificial intelligence* , and family support on entrepreneurial intentions. Data were obtained through a questionnaire distributed via *Google Form* to 192 grade X students of SMA Negeri 1 Surakarta who were taking the Crafts subject. The sampling technique used was *probability sampling* .

Table 3. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Entrepreneurship Education	192	15	30	22.13	4,678
Utilization of Artificial Intelligence	192	15	30	22.41	4,414
Family Support	192	20	40	30.20	6,515
Entrepreneurial Intention	192	13	28	20.34	3,219

(Source: Processed Primary Data, 2025)

Based on Table 3 regarding descriptive statistics, the entrepreneurship education variable has a minimum value of 15 and a maximum of 30 with a mean of 22.13 and a standard deviation of 4.678. Because the standard deviation value

is smaller than 30% of the mean (6.639), the data is declared good and shows no deviation. The *artificial intelligence utilization variable* has a minimum value of 15 and a maximum of 30 with a mean of 22.41 and a standard deviation of 4.414, where the value is also smaller than 30% of the mean (6.723), so the data does not experience deviation. The family support variable has a minimum value of 20 and a maximum of 40 with a mean of 30.20 and a standard deviation of 6.515, which is still below 30% of the mean (9.06), so the data is classified as stable. Meanwhile, the entrepreneurial intention variable has a minimum value of 13 and a maximum of 28 with a mean of 20.34 and a standard deviation of 3.219, which is also smaller than 30% of the mean (6.102), so that all variables in this study can be stated to have good data quality and do not show any deviations.

Classical Assumption Test Results

Normality Test

Table 4. Normality Test Results

Variables	Asymp. Sig (2-tailed)	Information
Entrepreneurship Education, Utilization of Artificial Intelligence, Family Support → Entrepreneurial Intention	0.200	Normally Distributed

(Source: Processed Primary Data, 2025)

A significance value of $0.200 > 0.05$ indicates that the data is normally distributed.

Linearity Test

Table 5 Linearity Test Results

Variables	Deviation from Linearity	Information
Entrepreneurship Education	0.825	Linear
Utilization of Artificial Intelligence	0.398	Linear
Family Support	0.307	Linear

(Source: Processed Primary Data, 2025)

All deviation from linearity values are > 0.05 , so the relationship between each independent variable and entrepreneurial intention is linear.

Multicollinearity Test

Table 6. Multicollinearity Test Results

Variables	Tolerance	VIF	Information
Entrepreneurship Education	0.988	1,012	There is no multicollinearity
Utilization of Artificial Intelligence	0.996	1,004	There is no multicollinearity
Family Support	0.992	1,008	There is no multicollinearity

(Source: Processed Primary Data, 2025)

Tolerance values > 0.1 and VIF < 10 indicate that there is no multicollinearity between independent variables.

Heteroscedasticity Test

Table 7. Heteroscedasticity Test Results

Variables	Significance	Information
Entrepreneurship Education	0.489	There is no heteroscedasticity
Utilization of Artificial Intelligence	0.212	There is no heteroscedasticity
Family Support	0.190	There is no heteroscedasticity

(Source: Processed Primary Data, 2025)

All significance values are > 0.05, so the regression model is declared free from heteroscedasticity.

Hypothesis Test Results

Linear Regression Test

Linear regression analysis was used to test the influence of entrepreneurship education (X1), utilization of *artificial intelligence* (X2), and family support (X3) on entrepreneurial intentions (Y).

Table 8. Linear Regression Test Results

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1,305	1,106	–	1,180	0,240
Entrepreneurship Education	0.290	0.030	0.421	9,774	0,000
Utilization of Artificial Intelligence	0.155	0.031	0.213	4,958	0,000
Family Support	0.303	0.021	0.613	14,257	0,000

(Source: Processed Primary Data, 2025)

The regression equation obtained is:

$$Y = 1.305 + 0.290X_1 + 0.155X_2 + 0.303X_3$$

Interpretation:

The constant 1.305 indicates the baseline value of entrepreneurial intention when all independent variables are zero.

Entrepreneurship education has a positive effect ($\beta = 0.290$), meaning that the better the entrepreneurship education, the higher the entrepreneurial intention.

The use of *artificial intelligence* has a positive effect ($\beta = 0.155$), indicating that the use of AI increases the tendency to become an entrepreneur.

Family support has the largest coefficient ($\beta = 0.303$), making it the most dominant factor in increasing entrepreneurial intentions.

Partial Significance Test (t-Test)

The t-test is used to determine the effect of each independent variable on entrepreneurial intention separately. The test criteria are: if the calculated t value > t table or the significance value < 0.05, then H0 is rejected and H1 is accepted. With a significance level of 0.05 and degrees of freedom (df) = 192 – 3 – 1 = 188, the t-table value is 1.972.

The test results show that entrepreneurship education (X1) has a t-count of 9.774 with a sig of 0.000; the use of *artificial intelligence* (X2) has a t-count of 4.958 with a sig of 0.000; and family support (X3) has a t-count of 14.257 with a sig of 0.000. All t-count values are > 1.972 and sig < 0.05, so the three variables have a significant effect on students' entrepreneurial intentions. Among the three, family support is the most dominant variable because it has the highest t-count value (14.257).

Simultaneous Significance Test (F Test)

Table 9. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1296,796	3	432,265	119,068	0,000
Residual	682,517	188	3,630		
Total	1979,313	191			

(Source: Processed Primary Data, 2025).

The calculated F value is 119.068 > F table 2.65 and sig 0.000 < 0.05, so that the three variables simultaneously have a positive and significant effect on entrepreneurial intentions.

Coefficient of Determination (R²) Test

Table 10. Results of the Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error
1	0.809	0.655	0.650	1,90536

(Source: Processed Primary Data, 2025)

The R² value of 0.655 indicates that 65.5% of the variation in entrepreneurial intention can be explained by entrepreneurship education, the use of *artificial intelligence* , and family support, while 34.5% is influenced by other factors outside the model. This value indicates that the research model is strong and relevant in explaining high school students' entrepreneurial intentions.

Discussion

The Influence of Entrepreneurship Education on Entrepreneurial Intention

The t-test results show a calculated t-value of 9.774, greater than the t-table of 1.972, with a significance of 0.000 < 0.05. This means that entrepreneurship education has a positive and significant effect on the entrepreneurial intention of students at SMA Negeri 1 Surakarta with a coefficient of 0.290. This finding indicates that the better the quality of entrepreneurship education received by students, the higher their intention to become entrepreneurs. Entrepreneurship education is a learning program designed to build entrepreneurial character through learning experiences, business practices, business simulations, and entrepreneurial projects so as to increase students' self-confidence and motivation in creating business opportunities. Poor entrepreneurship education only provides knowledge about business, but also develops skills, self-confidence, and a positive attitude towards entrepreneurial activities. Through effective and practical learning, students become better able to recognize business opportunities and understand how to manage a business. Therefore, the better the quality of entrepreneurship education received by students, the higher the students' intention to become entrepreneurs in the future.

These results align with Ajzen's (1991) Theory of *Planned Behavior* , which posits that attitudes toward behavior are a crucial factor in shaping intentions. Entrepreneurship education helps shape positive attitudes, boost self-confidence, and enhance students' perceived ability to face the challenges of the business

world. These findings also align with research by Triadi et al. (2024), which demonstrated that entrepreneurship education significantly impacts high school students' entrepreneurial interests. Therefore, schools need to implement more practical and experiential entrepreneurship learning to encourage students to consider entrepreneurship as a career choice.

The Influence of Artificial Intelligence Utilization on Entrepreneurial Intentions

Based on the t-test, the calculated t-value was $4.958 > t\text{-table } 1.972$ with a significance of $0.000 < 0.05$. This means that the use of AI has a significant effect on the entrepreneurial intention of students at SMA Negeri 1 Surakarta. The coefficient of 0.155 indicates that the use of AI has a positive influence on increasing students' entrepreneurial intentions. The use of AI makes it easier for students to obtain information about business trends, consumer behavior, and digital marketing strategies. AI also helps develop creative ideas through simulations, data analysis, and algorithm-based recommendations that enrich entrepreneurial insights. The more optimally students utilize AI to search for business information, analyze market opportunities, and develop business ideas, the higher their desire to become entrepreneurs. In addition, the use of AI can also increase students' knowledge, creativity, and self-confidence in designing and running a business. This condition encourages the formation of a positive attitude towards entrepreneurship so that students' entrepreneurial intentions increase.

The use of AI in learning can improve students' positive attitudes, self-confidence, and adaptability to technology. Through AI, students can explore business ideas, analyze markets, and design digital business strategies. This strengthens *perceived behavioral control*, which ultimately increases entrepreneurial intentions. This finding aligns with *the Theory of Planned Behavior* and research by Solorzano et al. (2024), which states that the use of AI has a significant impact on entrepreneurship.

The Influence of Family Support on Entrepreneurial Intentions

Based on the results of the t-test, $14.257 > t\text{-table } 1.972$ with a significance of $0.000 < 0.05$. This means that family support has a significant effect on the entrepreneurial intention of students at SMA Negeri 1 Surakarta. The coefficient of 0.303 indicates that the greater the family support, the higher the entrepreneurial intention. Family support is emotional, moral, financial, and practical assistance given to individuals to achieve goals. Families that provide trust and opportunities for children to develop business ideas can foster a positive attitude, self-confidence, and a spirit of independence in entrepreneurship. Support from the family can increase students' motivation,

self-confidence, and courage to try to start a business. When the family provides encouragement and trust in their business ideas, students will feel more supported in developing their entrepreneurial interests. Therefore, the greater the family support received, the stronger the student's desire to become an entrepreneur.

These findings align with the TPB, which states that subjective norms, such as family support, influence a person's intentions. These findings also align with research by Fadilah and Numalasari (2023), which showed that the family environment plays a positive role in shaping entrepreneurial intentions.

The Simultaneous Influence of Entrepreneurship Education, AI, and Family Support

Based on the F-test results, entrepreneurship education, AI utilization, and family support have a positive and significant influence on the entrepreneurial intentions of students at SMA Negeri 1 Surakarta. Entrepreneurship education helps students acquire business knowledge and skills through learning experiences that encourage creativity and business design skills. Meanwhile, AI utilization supports students in seeking business information, analyzing market opportunities, and developing more innovative and technology-based business ideas. Furthermore, family support provides moral encouragement, motivation, and self-confidence for students to dare to try and face the risks of entrepreneurship.

Simultaneously, all three variables were shown to significantly influence entrepreneurial intention. This finding aligns with the TPB, which states that intention is influenced by attitudes toward behavior, subjective norms, and perceived behavioral control. Entrepreneurship education shapes positive attitudes toward entrepreneurship, family support strengthens subjective norms, and the use of AI increases perceived behavioral control through mastery of business technology and information.

This research is novel in three key aspects. First, it doesn't simply include *Artificial Intelligence* (AI) as an additional variable, but operationally positions it as *a learning enabler* and *entrepreneurial tool*, measured through concrete indicators, such as the use of AI in business idea exploration, market opportunity analysis, and business innovation development. This approach differs from previous research, which generally places technology solely as a context, rather than as a measurable variable.

Second, this study examines the simultaneous and integrative roles of entrepreneurship education, family support, and AI utilization in a single empirical model for secondary school students. Most previous research tends to examine these factors separately, thus failing to describe their interaction in shaping entrepreneurial intentions.

Third, this study focuses on the context of high school students as a digital native generation, a relatively rare area of study in technology-based entrepreneurship literature. Thus, this study provides a new perspective on how AI technology can be integrated into the entrepreneurship learning process starting in secondary education. With these three aspects, this study not only expands the study of entrepreneurial intentions from a variable perspective but also offers an integrative approach based on digital technology relevant to the current industrial era.

Conclusion And Suggestions

1. The results of this study confirm that effectively and relevantly designed entrepreneurship education has a strategic role in shaping students' positive perceptions of entrepreneurial activities, which in turn has an impact on increasing their intention to become entrepreneurs in the future.
2. The use of *Artificial Intelligence* (AI) has a positive impact on students' entrepreneurial intentions. Optimizing the use of AI in learning and business idea development can shape positive perceptions of technology, thereby increasing students' readiness and interest in entrepreneurship.
3. Family support has been shown to have a positive influence on students' entrepreneurial intentions. The greater the support provided, whether in the form of moral support, motivation, or direct assistance, the stronger the students' desire to become entrepreneurs. These findings confirm that the role of the family is a crucial factor in shaping and strengthening students' entrepreneurial intentions.
4. Entrepreneurship education, the use of *Artificial Intelligence* (AI), and family support simultaneously significantly influenced the entrepreneurial intentions of students at SMA Negeri 1 Surakarta. This indicates that the combination of education, technology, and social factors plays a crucial role in shaping and strengthening students' interest in entrepreneurship.

Schools are advised to develop practical, practice-based entrepreneurship learning and integrate AI into activities such as market research and business idea development. Teachers are expected to guide the productive and innovative use of AI through project-based assignments. Students are encouraged to actively utilize AI to develop creativity and business opportunities, as well as foster independence and risk-taking. Parents are encouraged to provide concrete support in the form of motivation, trust, and simple facilitation. Furthermore, other researchers are encouraged to add variables such as *self-efficacy* or capital availability and expand the scope of their research.

Theoretically, the results of this study reinforce *the Theory of Planned Behavior* (Ajzen, 1991), which states that attitudes, subjective norms, and behavioral control influence a person's intentions. Entrepreneurship education forms family support, reflecting subjective norms that encourage entrepreneurial intentions. Practically, synergy between schools, families, and the use of technology is needed to increase students' entrepreneurial interest through project-based learning and AI integration. Furthermore, students are expected to actively develop entrepreneurial skills. Further researchers are advised to add other variables and expand the sample size for more comprehensive research results.

Bibliography

Allen, J., & van der Velden, R. (2011). *The flexible professional in the knowledge society: General Results of the REFLEX Project*. Higher Education.

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. *Entrepreneurship theory and practice* , 38(2), 217-254. <https://doi.org/10.1111/etap.1209>

Dewi, SN (2017). The impact of entrepreneurial decisions on social environment and formal education on entrepreneurial motivation. *Journal of Business Behavior and Strategy* , 5(1), 109-116. <https://doi.org/10.26486/jpsb.v5i1.330>

Dinis, A. (2024). The impact of entrepreneurship education on students' desirability and intentions to pursue an entrepreneurial career: A study in general and vocational secondary schools of Cabo Verde. *Journal of Innovation and Entrepreneurship* , 13(1), 34. <https://doi.org/10.1186/s13731-024-00382-8>

Fakhri, MM, Putra, KP, Rifqie, DM, Annafiah, N., & Syukur, PA (2024). School community empowerment through artificial intelligence and augmented reality literacy at SMAN 2 Barru. Mattawang: *Journal of Community Service*, 5(3), 94-103. <https://doi.org/10.35877/454RI.mattawang2986>

Fitramadhana, R. (2024). Massification of higher education and employability policies in Indonesia [Preprint]. *ResearchGate* . <https://doi.org/10.13140/RG.2.2.23938.29127>

Forliano, C., De Bernardi, P., & Yahiaoui, D. (2021). Entrepreneurial universities: A bibliometric analysis within the business and management domains.

Technological Forecasting and Social Change, 165, 120522.

<https://doi.org/10.1016/j.techfore.2020.120522>

Hartono, C., Hartono, W., Hongdiyanto, C., & Ongkowiyo, G. (2022, February). The influence of entrepreneurship education towards entrepreneurial intention mediated by attitude, subjective norms, and perceived behavioral control of business management students at Ciputra University Surabaya. In *Proceedings of the International Conference on Family Business and Entrepreneurship* (Vol. 2, No. 1). <http://dx.doi.org/10.33021/icfbe.v2i1.3581>

Herawati, Y., & Hardiansyah, R. (2025). The influence of AI utilization and digital community empowerment on entrepreneurial interest among Generation Z in Sumbawa Regency. *Pendas: Scientific Journal of Elementary Education*, 10(02), 250-268. <https://doi.org/10.23969/jp.v10i03.30873>

International Labor Organization. (2020). *Global Employment Trends for Youth*.

Iwu, C.G., Opute, P.A., Nchu, R., Eresia-Eke, C., Tengeh, R.K., Jaiyeoba, O., & Aliyu, O.A. (2021). Entrepreneurship education, curriculum and lecturer competency as antecedents of student entrepreneurial intention. *The International Journal of Management Education*, 19(1), 100295. <https://doi.org/10.1016/j.ijme.2019.03.007>

Mufida, LLA, & Nasir, MS (2023). Dynamic analysis of unemployment rates in Indonesia. *Journal of Macroeconomics and Social Development*, 1(1), 1-14. <https://doi.org/10.47134/jmsd.v1i1.15>

Nurhadifah, SN, & Sukanti, S. (2018). The influence of personality, family environment, and peers on the entrepreneurial interest of accounting education students, Faculty of Economics, Yogyakarta State University. *Indonesian Journal of Accounting Education*, 16(2). <https://doi.org/10.21831/jpai.v16i2.22055>

Rusmana, D. (2020). The influence of 21st-century digital skills on entrepreneurship education to improve the entrepreneurial competence of vocational high school students. *Journal of Economics of Education and Entrepreneurship*, 8(1), 17. <https://doi.org/10.26740/jepk.v8n1.p17-32>

Salahudin, Akos, M., & Hermawan, A. (2018). Improving the quality of education through human resources and infrastructure at MTsN Banjar Selatan 2, Banjarmasin City. *Journal of Administrative and Management Sciences*, 2(1), 1–13. <https://doi.org/10.56662/administraus.v2i1.18>

- Sucarita, V. (2023). Analysis of factors influencing entrepreneurial motivation (a study of the Trimulyo Village community, Tegineneng District). *Journal of Education and Counseling* , 5(1), 1349–1358. <https://doi.org/10.31004/jpdk.v5i1>
- Tentama, F., Mulasari, SA, Sukesi, TW, Sulistyawati, S., & Subardjo, S. (2024). Family support, need for achievement, and entrepreneurial orientation on entrepreneurial intentions in vulnerable groups. *Int. J. Public Health Sci.*, 13, 974. <http://doi.org/10.11591/ijphs.v13i2.23015>
- Trisnawati, N. (2014). The influence of entrepreneurial knowledge and family social support on the entrepreneurial interest of students at SMK Negeri 1 Pamekasan. *Journal of Economics, Education and Entrepreneurship* , 2(1), 57-71. <https://doi.org/10.26740/jepk.v2n1.p57-71>
- Wijaya, RBGMO, & Utami, ED (2021). Determinants of unemployment among vocational high school graduates in Indonesia in 2020: Analysis of February 2020 Sakernas data. Proceedings of the National Seminar on Official Statistics (SNOS), STIS Statistics Polytechnic, 801–810.
- Yanti, A. (2019). The influence of entrepreneurship education, self-efficacy, locus of control, and entrepreneurial character on entrepreneurial interest. *Maneggio: Scientific Journal of Master of Management* , 2(2), 268-283. <https://doi.org/10.30596/maneggio.v2i2.3774>