

The impact of sustainable entrepreneurship education and self-efficacy on students' entrepreneurial mindset and attitude

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Abstract: This study aims to foster a shift in students' entrepreneurial mindset through sustainable entrepreneurship education. This initiative is expected to contribute to the recovery of the MSME (Micro, Small, and Medium Enterprises) sector while enhancing the quality of education by expanding the content of entrepreneurship courses, inviting experts to share their experiences, organizing events to promote student products, and facilitating internships in the entrepreneurial industry. Data were collected through questionnaires, with responses measured using a Likert scale. A literature review was also conducted to support the research. The population of this study consists of students from universities in West Jakarta, with a sample of 153 respondents. The data were analyzed using a structural equation modeling approach based on components or variances. The results of hypothesis testing reveal that: (1) Entrepreneurship education has a positive and significant effect on the entrepreneurial mindset; (2) Self-efficacy has a positive and significant effect on the entrepreneurial mindset; (3) Entrepreneurship education has a positive and significant effect on entrepreneurial attitude; (4) Self-efficacy has a positive and significant effect on entrepreneurial attitude; (5) Entrepreneurial attitude has a positive and significant effect on the entrepreneurial mindset; (6) Entrepreneurial attitude does not mediate the relationship between entrepreneurship education and entrepreneurial mindset; and (7) Entrepreneurial attitude does not mediate the relationship between self-efficacy and entrepreneurial mindset.

Keywords: *Entrepreneurial attitude, Entrepreneurial mindset, Entrepreneurship education, Self efficacy.*

1. Introduction

The Covid-19 pandemic, which began in 2020, significantly disrupted Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, leading to widespread bankruptcies, particularly in the tourism and hospitality sectors, including restaurants. Approximately 7 million MSME workers lost their jobs as a result of the pandemic (Harun et al., 2022). According to the Indonesian MSME Association (Akumindo), the association has continuously urged the government to provide direct financial assistance to MSMEs to support economic recovery. In 2019, Indonesia had 56.7 million MSMEs, but this number dropped to 34 million by 2020 due to the pandemic (Susilowati, 2020). This reflects the severe economic impact of the pandemic on the MSME sector, which plays a critical role in Indonesia's economy (Purnomo & Kusuma, 2021).

A 2021 survey conducted by the United Nations Development Programme (UNDP) revealed that 24% of MSMEs in Indonesia ceased operations during the pandemic. The reasons for this were varied, with 35.2% citing a lack of funds for production, 30.2% reporting a sharp decline in demand, and 27.5% closing due to government regulations (UNDP, 2021). The prolonged closure of businesses, with 46% of MSMEs remaining closed for more than six months, exacerbated the unemployment problem in Indonesia. By 2020, unemployment rates across all education levels had increased by 1.22% to 3.19%,

and while some improvement was seen in 2021, the recovery was uneven across education levels (Kusumawati & Dewi, 2021).

Entrepreneurship has been identified as a key solution to reducing unemployment and poverty in Indonesia (Ismail et al., 2021). Entrepreneurship education at the university level, coupled with fostering entrepreneurial attitudes from an early age, is crucial for developing countries like Indonesia, especially during crises (Kusuma & Sunaryo, 2020). The role of entrepreneurship education in shaping students' entrepreneurial mindset is critical in addressing the low rate of entrepreneurship in Indonesia. Many graduates are oriented towards seeking employment rather than creating jobs, contributing to the low number of entrepreneurs in the country (Wahid & Susanto, 2021). This situation underscores the need for universities to play a more active role in promoting entrepreneurship (Wijaya et al., 2022).

Entrepreneurial mindset refers to the ability to identify and exploit opportunities by analyzing and utilizing available resources, even those outside one's immediate control (McMullen & Kier, 2016). Research has shown that entrepreneurship education significantly influences the development of entrepreneurial attitudes and mindsets among students (Bakar et al., 2020). Furthermore, self-efficacy, or the belief in one's ability to succeed in specific situations, has been found to have a positive impact on entrepreneurial intentions (Widjaja et al., 2021). Fostering self-efficacy through practical experiences, such as internships, events, and guest lectures by industry experts, is essential in cultivating an entrepreneurial mindset among university students (Cui et al., 2021).

This study builds on previous research by Charina & Suyanto (2019), Suryaningsih & Agustin (2020), and Cui et al. (2021), which demonstrated the positive impact of entrepreneurship education on students' entrepreneurial intentions. However, this research focuses on millennials aged 20 to 30 years in Jakarta and investigates the mediating role of entrepreneurial attitude between entrepreneurship education, self-efficacy, and the entrepreneurial mindset. By examining this specific demographic, the study contributes new insights into how entrepreneurship education and self-efficacy interact to shape the entrepreneurial mindset in a developing country context.

2. Literature Review

2.1. Entrepreneurial Mindset

The entrepreneurial mindset is defined as the ability to identify and exploit opportunities by analyzing and considering resources beyond one's immediate control (McMullen & Kier, 2016). Dunlap (as cited in Neneh, 2012) emphasizes that starting a business fundamentally requires adopting an entrepreneurial mindset, enabling individuals to accept and manage risks effectively. Buchari (2013) also notes that entrepreneurs often receive support from their families or parents in their business endeavors. This study builds upon prior research conducted by Kirana and Nugraha (2018) and Purwaningsih (2019), which demonstrated that an entrepreneurial mindset positively and significantly influences students' entrepreneurial intentions. The entrepreneurial mindset is characterized by an open approach to problem-solving, in contrast to the deliberative mindset, which tends to process information narrowly, weighing favorable information more heavily than unfavorable, and displaying optimistic assessments of feasibility (Keller & Gollwitzer, 2017). McMullen and Kier (2016) further elaborate that the entrepreneurial mindset involves the capacity to identify and seize opportunities without being constrained by currently unavailable resources. Recent research continues to support the importance of the entrepreneurial mindset. According to Ndofirepi (2020), an entrepreneurial mindset fosters a proactive approach to opportunity recognition and risk management, critical for entrepreneurial success. Similarly, Lin et al. (2022) highlight that entrepreneurship education plays a pivotal role in developing students' entrepreneurial mindset, which is essential for entrepreneurial behavior in dynamic market environments.

2.2. Entrepreneurship Education

Entrepreneurship education is widely recognized as an effective approach to fostering and developing entrepreneurial interest among students (Denanyoh, Adjei, & Nyemekye, 2015). It plays a

crucial role in shaping students' mindset, attitudes, and behaviors toward entrepreneurship. O'Gorman, Byrne, and Pandya (as cited in Suwanto, 2020) emphasize that entrepreneurship education not only imparts knowledge but also cultivates entrepreneurial competencies, which are essential for students as they transition into the entrepreneurial ecosystem. This is supported by the notion that entrepreneurship education enhances students' ability to identify opportunities and manage the risks inherent in starting a business (Bae et al., 2020).

According to Bukirom et al. (as cited in Ginting & Siagian, 2020), entrepreneurship education can be measured using several key indicators: (1) Entrepreneurial Desire, which reflects students' interest and motivation to pursue entrepreneurial ventures; (2) Entrepreneurial Knowledge, which involves the development of critical insights and skills needed for successful entrepreneurship; and (3) Entrepreneurial Awareness, which is the understanding of entrepreneurial opportunities and challenges in the business landscape. These dimensions form the foundation of effective entrepreneurship education, enabling students to build a strong entrepreneurial mindset and develop the confidence needed to engage in entrepreneurial activities.

Recent studies support the positive impact of entrepreneurship education on students' entrepreneurial intentions. For instance, Liñán and Fayolle (2019) found that well-designed entrepreneurship education programs significantly influence students' entrepreneurial intentions and their ability to start new ventures. Furthermore, Rae and Wang (2021) argue that entrepreneurship education not only increases entrepreneurial knowledge but also promotes entrepreneurial self-efficacy, enhancing students' belief in their capability to start and run a business. These findings underscore the critical role of entrepreneurship education in shaping future entrepreneurs.

2.3. *Self-Efficacy*

According to Sunyoto and Burhanudin (2015), self-efficacy is defined as an individual's belief in their ability to display the required behavior in a specific situation. Similarly, Alwisol (2014) describes self-efficacy as a self-assessment of whether a person can perform actions that are good or bad, right or wrong, and whether they can accomplish tasks as required. Luthans (2014) expands on this by stating that self-efficacy refers to one's belief in their ability to mobilize cognitive resources and actions necessary to successfully execute a specific task. Self-efficacy is a critical psychological trait that influences individuals' entrepreneurial intentions and behaviors (Bandura, 2019).

Recent studies highlight the role of self-efficacy in entrepreneurial success. Jiatong et al. (2021) propose that self-efficacy can be measured based on the following dimensions: (1) Confidence in successfully identifying new business opportunities, (2) Confidence in creating new products, (3) Creativity, which includes confidence in thinking creatively and generating creative products, and (4) Idea generation, referring to confidence in producing new ideas and selling them. These indicators align with the broader definition of self-efficacy as an essential factor in entrepreneurial behavior, fostering innovation and resilience (Lee et al., 2020).

2.4. *Entrepreneurial Attitude*

Nugroho and Setiaji (2018) state that attitude is a way of communicating one's mood to others and is also a person's mental approach to viewing something from within. Entrepreneurial attitude encompasses several elements, such as interest in business opportunities, creative thinking, innovation, a positive outlook on business failures, leadership qualities, responsibility, and a willingness to face risks and challenges (Burnama, 2019). According to Rachmawati, Diana, and Mawardi (2020), attitude is a relatively stable tendency to react either positively or negatively toward a particular person or object. Liliweri (as cited in Rachmawati, Diana, & Mawardi, 2020) adds that attitude is a positive or negative reinforcement toward a psychological object. Kendler (as cited in Rachmawati, Diana, & Mawardi, 2020) describes attitude as the tendency to approach or avoid certain situations. Hendro (as cited in Utami & Denmark, 2020) further explains that entrepreneurial attitude refers to an individual's response,

perspective, and mindset toward various challenges, such as fear, difficulties, criticism, suggestions, pressures, and obstacles encountered in business operations.

Recent studies have highlighted the critical role of entrepreneurial attitude in fostering entrepreneurial success. According to Fayolle and Gailly (2020), a positive entrepreneurial attitude significantly impacts an individual's ability to persevere through challenges, adapt to new market conditions, and innovate within competitive environments. Furthermore, Zhao et al. (2021) found that individuals with strong entrepreneurial attitudes are more likely to exhibit leadership qualities, take calculated risks, and overcome setbacks, thereby increasing their likelihood of entrepreneurial success.

2.5. Theoretical Framework

Research conducted by Charina and Suyanto (2019), Suryaningsih and Agustin (2020), Cui, Sun, and Bell (2021), as well as Perkasa, Triansah, and Iskandar (2020) has consistently demonstrated that entrepreneurship education plays a pivotal role in shaping students' entrepreneurial intentions. These studies highlight that effective entrepreneurship education not only equips students with the necessary knowledge and skills but also fosters an entrepreneurial mindset by enhancing their motivation to pursue entrepreneurial careers. Moreover, entrepreneurship education provides students with the capacity to recognize and seize entrepreneurial opportunities, thus significantly influencing their interest and decision to engage in entrepreneurship.

Similarly, the role of self-efficacy in fostering entrepreneurial mindset has been widely recognized. Studies conducted by Satyantoro (2020), Putra and Adnyani (2021), and Charina and Suyanto (2019) emphasize that self-efficacy, or an individual's belief in their ability to perform specific entrepreneurial tasks, greatly contributes to their entrepreneurial mindset. High self-efficacy leads to increased confidence in one's ability to overcome entrepreneurial challenges, take calculated risks, and persist in the face of adversity. This heightened self-belief encourages students to adopt a proactive and growth-oriented mindset, further enhancing their intention to pursue entrepreneurial ventures. Thus, both entrepreneurship education and self-efficacy are critical determinants in shaping the entrepreneurial mindset and attitude of students.

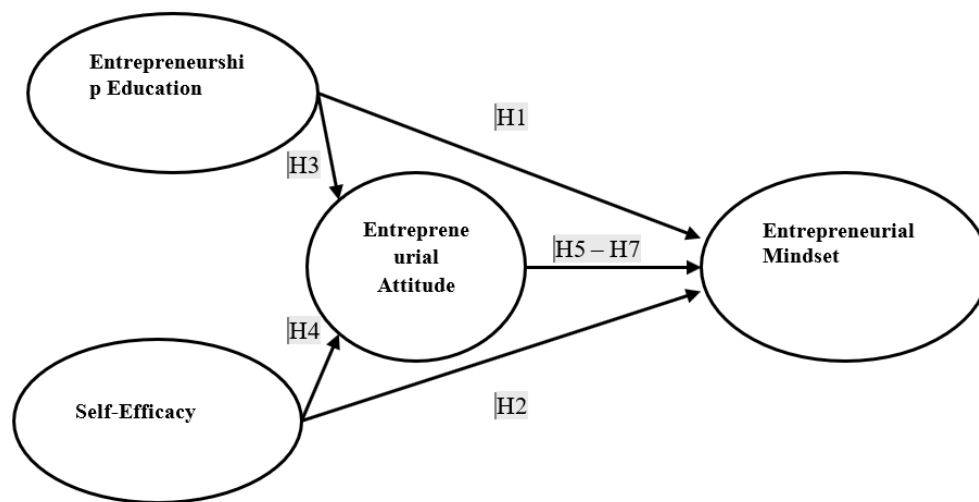


Figure 1.
Conceptual framework.

2.6. Hypotheses

H₁: Entrepreneurship education has a positive and significant impact on the entrepreneurial mindset.

H₂: Self-efficacy has a positive and significant impact on the entrepreneurial mindset.

H₃: Entrepreneurship education has a positive and significant impact on entrepreneurial attitude.

H₄: Self-efficacy has a positive and significant impact on entrepreneurial attitude.

H₅: Entrepreneurial attitude has a positive and significant impact on the entrepreneurial mindset.

H₆: Entrepreneurial attitude mediates the relationship between entrepreneurship education and the entrepreneurial mindset.

H₇: Entrepreneurial attitude mediates the relationship between self-efficacy and the entrepreneurial mindset.

3. Methodology Research

In this study, data collection is carried out using a questionnaire distributed via Google Forms. The use of an online questionnaire allows for efficient and accessible data collection from a broad range of respondents, ensuring convenience and time-effectiveness. The questionnaire consists of structured statements measured using a five-point Likert scale, ranging from "strongly disagree" to "strongly agree," to assess the variables related to entrepreneurship education, self-efficacy, entrepreneurial mindset, and entrepreneurial attitude. The questionnaire is designed based on previously validated instruments from relevant literature and adapted to the context of this research.

Prior to data collection, a pilot test is conducted on a small group of respondents to ensure clarity, consistency, and reliability of the questionnaire items. Feedback from the pilot test is used to refine the questionnaire before the full-scale distribution.

The target population for this study consists of active university students located in Jakarta. The sample size is determined to be 153 respondents. The sampling technique applied is purposive sampling, focusing on students who have completed or are currently enrolled in entrepreneurship courses. These students are considered appropriate respondents as they are expected to have knowledge and experience relevant to entrepreneurship education and self-efficacy, which are key variables in this study. In terms of data analysis, this research utilizes the Component or Variance-Based Structural Equation Model (SEM) through the Partial Least Square (PLS) approach. The analysis includes several steps:

4. Result and Discussion

Descriptive statistical analysis is used to analyze the data by describing or illustrating the collected data as it is, without drawing conclusions that apply universally or making generalizations. The data used for descriptive analysis in this study include the variables of entrepreneurship education, self-efficacy, entrepreneurial attitude, and entrepreneurial mindset. Based on the distribution of the questionnaires, the results can be described as follows.

4.1. Entrepreneurship Education

The characteristics of the questionnaire based on the entrepreneurship education variable can be seen in Table 1 :

Table 1.
Descriptive statistics of entrepreneurship education.

Indicator	Statement	N	Mean	Standard deviation
PK1	I have a desire to own my own business	153	3.776	0.999
PK2	I have a desire to independently manage my own business	153	3.935	0.869
PK3	I have a desire to develop my own business	153	3.924	0.894
PK4	Entrepreneurship education can increase my knowledge	153	3.976	0.797
PK5	Insights from entrepreneurship education determine my knowledge	153	3.906	0.849
PK6	I desire to raise awareness of business opportunities	153	3.941	0.831
PK7	I desire to raise awareness of entrepreneurship	153	3.905	0.872

Based on Table 1, it can be observed that the statement with the highest average (mean) is "PK4" at 3.976 with a standard deviation of 0.797. The statement, "Entrepreneurship education can increase my knowledge," indicates that respondents generally agree that entrepreneurship education enhances their knowledge. On the other hand, the statement with the lowest average (mean) is "PK1" at 3.776 with a standard deviation of 0.999. The statement, "I have a desire to own my own business," suggests that fewer respondents expressed a strong desire to have their own business.

4.2. Self-Efficacy

The characteristics of the questionnaire based on the self-efficacy variable can be seen in Table 2 below:

Table 2.
Descriptive statistics of self-efficacy.

Indicator	Statement	N	Mean	Standard deviation
ED1	I am confident in successfully discovering new business opportunities	153	3.782	0.884
ED2	I am confident in successfully creating new products	153	4.224	0.893
ED3	I am confident in having a creative mindset	153	4.165	0.765
ED4	I am confident in producing creative products	153	4.006	0.844
ED5	I have a desire to generate new ideas	153	3.812	0.861
ED6	I have a desire to sell the ideas I possess	153	3.965	0.804

Based on Table 2, it can be observed that the statement with the highest mean is "ED2," which has an average score of 4.224 and a standard deviation of 0.893. The statement, "I am confident in successfully creating new products," reflects a strong level of confidence among respondents regarding their ability to develop new products. This indicates that the majority of respondents perceive themselves as capable of innovating and producing new offerings, suggesting that they have high self-efficacy when it comes to product creation. The relatively high mean score for this statement demonstrates that respondents feel empowered in this aspect of entrepreneurship, which may imply that they have either acquired or developed the necessary skills and knowledge to confidently engage in new product development.

In contrast, the statement with the lowest mean is "ED1," with an average score of 3.782 and a standard deviation of 0.884. The statement, "I am confident in successfully discovering new business opportunities," suggests that respondents are less certain about their ability to identify new business opportunities. While the score is still above the midpoint of the Likert scale (3), indicating a moderate level of confidence, it reflects that fewer respondents strongly believe in their capacity to uncover new entrepreneurial possibilities. This could be due to various factors, such as a lack of exposure to market analysis techniques, limited practical experience in identifying gaps in the market, or a perceived difficulty in recognizing viable business opportunities.

The contrast between these two statements implies that respondents feel more secure in their ability to innovate and create products than in their ability to spot new business opportunities. This could point to a need for further training or education focused on opportunity recognition, market analysis, and entrepreneurial foresight to enhance students' overall entrepreneurial competencies.

4.3. Entrepreneurial Attitude

The characteristics of the questionnaire based on the entrepreneurial attitude variable can be seen in Table 3 below:

Table 3.
Descriptive statistics of entrepreneurial attitude.

Indicator	Statement	N	Mean	Standard deviation
SK1	Confidence gives me the initiative to take action	153	3.888	0.836
SK2	Confidence gives me strong conviction to start a business	153	3.953	0.86
SK3	Confidence enables me to manage a business	153	3.971	0.778
SK4	I have a clear goal in entrepreneurship	153	3.965	0.766
SK5	I want to evaluate every problem that arises	153	3.888	0.808
SK6	I want to set achievement targets that must be reached	153	3.9	0.802
SK7	Entrepreneurial attitude increases my courage to take calculated risks	153	3.894	0.79
SK8	I want to have the courage to try new things	153	3.841	0.843
SK9	I have the desire to create something different from others	153	3.906	0.863
SK10	I want to develop leadership qualities	153	3.841	0.843
SK11	I want to be responsible for the business I establish	153	3.947	0.806
SK12	I want to have the mentality to start a business	153	3.918	0.836

Based on Table 3, it can be observed that the statement with the highest average (mean) is "SK3" at 3.971, with a standard deviation of 0.778. The statement, "Confidence enables me to manage a business," indicates that respondents generally have a high level of confidence in their ability to manage their businesses. This suggests that the majority of respondents perceive self-confidence as a crucial factor that enables them to take charge and handle the responsibilities associated with running a business. This strong belief in their capability to manage a business demonstrates that self-confidence plays an important role in fostering entrepreneurial attitudes.

On the other hand, the statement with the lowest average (mean) is "SK10" at 3.841, with a standard deviation of 0.843. The statement, "I want to develop leadership qualities," implies that fewer respondents expressed a strong desire to cultivate leadership skills. While the mean score is still relatively high, indicating that some respondents do have aspirations to develop leadership qualities, it reflects a slightly lower level of enthusiasm compared to other entrepreneurial attitudes. This may suggest that some respondents are more focused on the operational aspects of entrepreneurship rather than on building leadership skills, or they may feel less confident in their potential as leaders.

The comparison between these two statements highlights that respondents feel more confident in their ability to manage a business than in their desire to actively pursue leadership development. This could point to a need for further emphasis on leadership training and development in entrepreneurship education programs to help students recognize the importance of leadership in entrepreneurial success.

4.4. Entrepreneurial Mindset

The characteristics of the questionnaire based on the entrepreneurial mindset variable can be seen in Table 4 below:

Table 4.
Descriptive statistics of entrepreneurial mindset.

Indicator	Statement	N	Mean	Standard deviation
KB1	An entrepreneurial mindset gives me motivation	153	4.053	0.842
KB2	An entrepreneurial mindset gives me purpose	153	3.965	0.887
KB3	I want to have knowledge about myself, others, and specific tasks	153	4.071	0.918
KB4	I want to have a strategy in entrepreneurship	153	3.976	0.926
KB5	I want to use past experiences and intuition	153	3.959	0.843
KB6	An entrepreneurial mindset helps me consider emotions and past memories	153	3.812	0.97
KB7	I want the ability to create various alternative options	153	3.971	0.836
KB8	I want to be able to make the best choice	153	3.706	1.021
KB9	I have the desire to reevaluate throughout the response process	153	3.729	0.975

Based on Table 4, it can be observed that the statement with the highest average (mean) is "KB3" at 4.071, with a standard deviation of 0.918. The statement, "I want to have knowledge about myself, others, and specific tasks," indicates that respondents generally have a strong desire to gain knowledge about themselves, other people, and the tasks they need to perform. This suggests that the respondents value self-awareness and understanding of interpersonal relationships, as well as task-related knowledge, which are important aspects of an entrepreneurial mindset. The relatively high mean score reflects that most respondents consider this type of knowledge essential for their entrepreneurial journey.

On the other hand, the statement with the lowest average (mean) is "KB8" at 3.706, with a standard deviation of 1.021. The statement, "I want to be able to make the best choice," indicates that fewer respondents feel confident or are strongly motivated to make the best possible decisions. The lower mean score, combined with a higher standard deviation, suggests that there is greater variability in respondents' perceptions regarding their ability or desire to make optimal decisions. This could imply that some respondents might feel less confident in their decision-making skills or may not prioritize this aspect of entrepreneurial thinking as much as others.

This comparison highlights that while respondents generally desire knowledge and self-awareness (KB3), they show less confidence or interest in making optimal choices (KB8). This suggests potential areas for further development, such as decision-making skills or confidence in making critical entrepreneurial choices.

4.5. Hypothesis Testing Results

The estimated values for the path relationships in the structural model must demonstrate statistical significance. The significance of the hypotheses is determined through the bootstrapping procedure. The evaluation of hypothesis significance is conducted by examining the parameter coefficient values and the significance of the T-statistic as reported in the bootstrapping algorithm output. To determine whether the relationship is significant, the T-statistic value is compared against the critical value from the T-table, where the alpha level of 0.05 (5%) corresponds to 1.96. If the T-statistic exceeds the critical T-table value, the relationship is deemed statistically significant.

Table 5.
Hasil Pengujian Hipotesis.

	Original sample	T statistics	P values	Conclusion
Direct effect				
Entrepreneurship Education -> Entrepreneurial mindset	0.238	2.405	0.016	H1 is accepted.
Self-Efficacy -> Entrepreneurial mindset	0.357	2.725	0.006	H1 is accepted.
Entrepreneurship education -> Entrepreneurial attitude	0.137	2.086	0.037	H1 is accepted.
Self-Efficacy -> Entrepreneurial attitude	0.805	12.808	0.000	H1 is accepted.
Entrepreneurial attitude -> Entrepreneurial mindset	0.292	2.172	0.030	H1 is accepted.
Indirect effect				
Entrepreneurship education -> Entrepreneurial attitude -> Entrepreneurial mindset berwirausaha	0.040	1.432	0.152	H6 is rejected.
Self-efficacy -> Entrepreneurial attitude -> Entrepreneurial mindset	0.235	2.123	0.034	H1 is accepted.

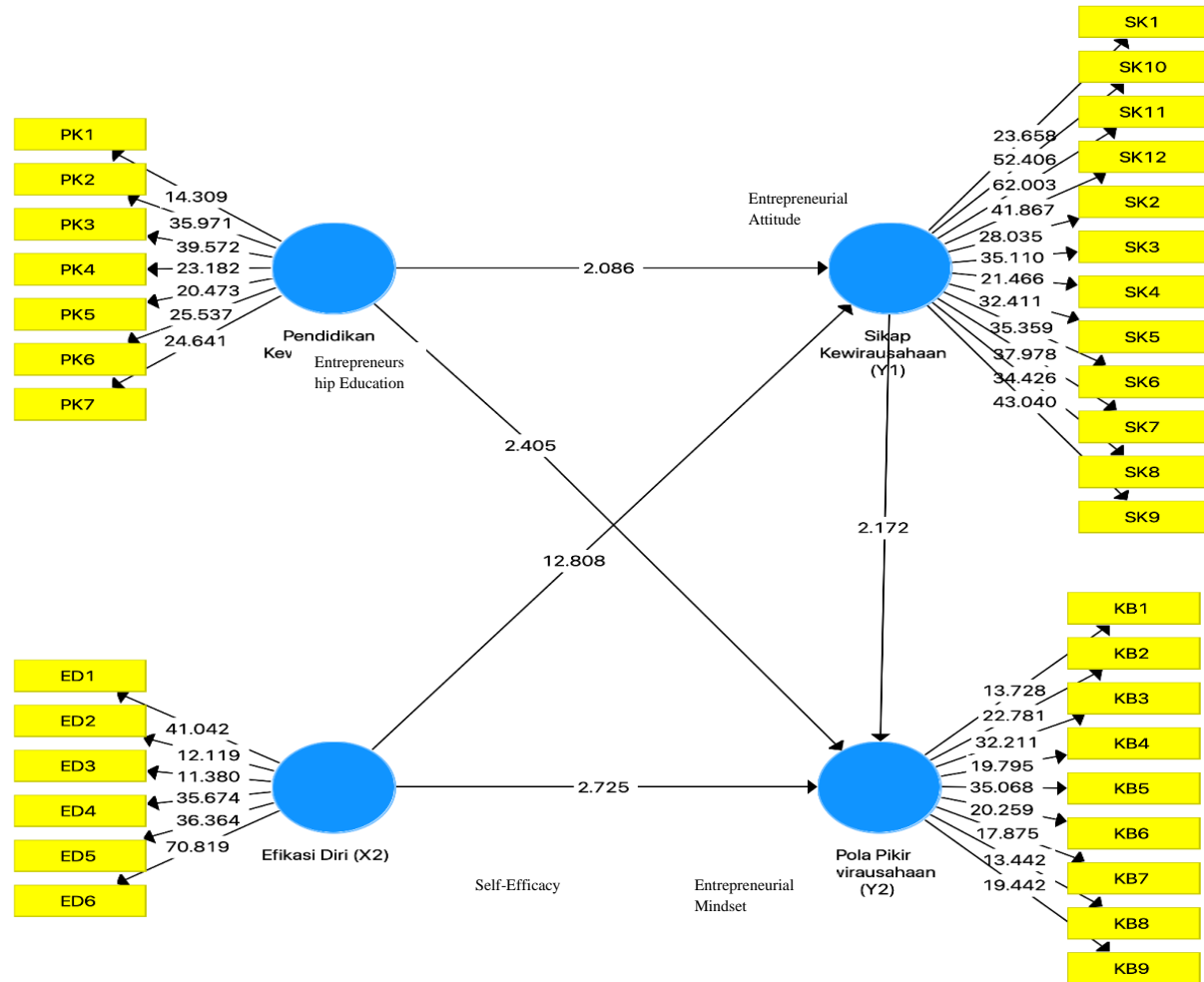


Figure 2.
Bootstrapping test results.

4.6. Discussion of Research Findings

4.6.1. The Relationship Between Entrepreneurship Education and Entrepreneurial

Based on Table 5 for hypothesis H1, the test results indicate that the relationship between entrepreneurship education and the entrepreneurial mindset is positive and significant, as shown by the original sample value of 0.238, which indicates a positive direction, and the t-statistic value of 2.405 > 1.96, which indicates significance. From the explanation above, it can be concluded that hypothesis H1 in this study demonstrates that entrepreneurship education has a positive and significant effect on the entrepreneurial mindset. These findings are consistent with the studies conducted by Zupan et al. (2018); Morris and Tucker (2021); Green et al. (2020); Rodriguez and Lieber (2020); and Saptono et al. (2020), which found that entrepreneurship education positively and significantly affects the entrepreneurial mindset.

4.6.2. The Relationship Between Self-Efficacy and Entrepreneurial Mindset

Based on Table 5 for hypothesis H2, the test results indicate that the relationship between self-efficacy and the entrepreneurial mindset is positive and significant, as shown by the original sample value of 0.357, which indicates a positive direction, and the t-statistic value of 2.725 > 1.96, which indicates significance. From the explanation above, it can be concluded that hypothesis H2 in this study demonstrates that self-efficacy has a positive and significant effect on the entrepreneurial mindset.

These findings are consistent with the studies conducted by Pihie and Bagheri (2013) and Shane (2004), which found that self-efficacy positively and significantly affects the entrepreneurial mindset.

4.6.3. *The Relationship Between Entrepreneurship Education and Entrepreneurial Attitude*

Based on Table 5 for hypothesis H3, the test results indicate that the relationship between entrepreneurship education and entrepreneurial attitude is positive and significant, as shown by the original sample value of 0.137, which indicates a positive direction, and the t-statistic value of 2.086 > 1.96, which indicates significance. From the explanation above, it can be concluded that hypothesis H3 in this study demonstrates that entrepreneurship education has a positive and significant effect on entrepreneurial attitude. These findings are consistent with the studies conducted by Handayati et al. (2020) and Barnard et al. (2019), which found that entrepreneurship education positively and significantly affects entrepreneurial attitude.

4.6.4. *The Relationship Between Self-Efficacy and Entrepreneurial Attitude*

Based on Table 5 for hypothesis H4, the test results indicate that the relationship between self-efficacy and entrepreneurial attitude is positive and significant, as shown by the original sample value of 0.805, which indicates a positive direction, and the t-statistic value of 12.808 > 1.96, which indicates significance. From the explanation above, it can be concluded that hypothesis H4 in this study demonstrates that self-efficacy has a positive and significant effect on entrepreneurial attitude. These findings are consistent with the studies conducted by Piperopoulos and Dimov (2015) and Zhao et al. (2005), which found that self-efficacy positively and significantly affects entrepreneurial attitude.

4.6.5. *The Relationship Between Entrepreneurial Attitude and Entrepreneurial Mindset*

Based on Table 5 for hypothesis H5, the test results indicate that the relationship between entrepreneurial attitude and entrepreneurial mindset is positive and significant, as shown by the original sample value of 0.292, which indicates a positive direction, and the t-statistic value of 2.172 > 1.96, which indicates significance. From the explanation above, it can be concluded that hypothesis H5 in this study demonstrates that entrepreneurial attitude has a positive and significant effect on the entrepreneurial mindset. These findings are consistent with the studies conducted by Santi et al. (2017) and Wibowo and Pramudana (2016), which found that entrepreneurial attitude positively and significantly affects the entrepreneurial mindset.

4.6.6. *The Relationship Between Entrepreneurship Education and Entrepreneurial Mindset with Entrepreneurial Attitude as a Mediating Variable*

Entrepreneurial attitude was found to have no partial mediating effect on the relationship between entrepreneurship education and entrepreneurial mindset. Based on the test results for the indirect effect, the original sample value was 0.040, which approaches +1, the T-Statistic value was 1.432 (<1.96), and the p-value was 0.152 (>0.05). Therefore, it can be concluded that the sixth hypothesis (H6) is rejected, and entrepreneurial attitude does not mediate the relationship between entrepreneurship education, which positively and significantly influences the entrepreneurial mindset. According to the VAF calculation, no mediation effect was found, with a proportion of 14% (no mediation). Thus, it can be concluded that with or without entrepreneurial attitude, entrepreneurship education will still positively influence the entrepreneurial mindset. As previously found, entrepreneurship education was shown to influence the improvement of the entrepreneurial mindset. Referring to the mediation decision tree, entrepreneurial attitude plays a "direct-only non-mediation" role, meaning that whether entrepreneurial attitude is present or not, entrepreneurship education is capable of influencing the entrepreneurial mindset in the same positive direction.

These findings are in line with studies by Yusoff et al., (2018), which also found no mediation role for entrepreneurial attitude in similar settings, and consistent with research by Suparman et al. (2019),

which demonstrated that entrepreneurship education directly influences entrepreneurial mindset without mediation effects.

4.6.7. The Relationship Between Self-Efficacy and Entrepreneurial Mindset with Entrepreneurial Attitude as a Mediating Variable

Entrepreneurial attitude was found to have a partial mediating effect on the relationship between self-efficacy and entrepreneurial mindset. Based on the test results for the indirect effect, the original sample value was 0.235, which approaches +1, the T-Statistic value was 2.123 (>1.96), and the p-value was 0.034 (<0.05). Therefore, it can be concluded that the seventh hypothesis (H7) is accepted, and entrepreneurial attitude mediates the relationship between self-efficacy, which positively and significantly influences the entrepreneurial mindset. According to the VAF calculation, partial mediation was found, with a proportion of 39% (partial mediation). Thus, it can be concluded that with the presence of entrepreneurial attitude, self-efficacy continues to positively influence the entrepreneurial mindset. As previously found, self-efficacy was shown to influence the improvement of the entrepreneurial mindset. Referring to the mediation decision tree, entrepreneurial attitude plays a "complementary mediation" role, meaning that with or without the entrepreneurial attitude variable, self-efficacy can influence the entrepreneurial mindset in the same positive direction.

These findings are supported by recent research, such as by Nurhadi et al. (2022), who highlighted that self-efficacy plays a key role in shaping entrepreneurial attitudes and behaviors, while Li and Zhang (2021) demonstrated that entrepreneurial attitude enhances the effect of self-efficacy on entrepreneurial mindset, indicating a partial mediation role. Similarly, Ramadani et al. (2023) confirmed that self-efficacy remains a critical factor in fostering entrepreneurial mindset, with entrepreneurial attitude acting as a complementary mediation.

5. Conclusion

This study, titled "The Impact of Sustainable Entrepreneurship Education and Self-Efficacy on Students' Entrepreneurial Mindset and Attitude," aimed to empirically examine the influence of sustainable entrepreneurship education and self-efficacy on the entrepreneurial mindset and attitude of students. Based on the results of hypothesis testing and data analysis, several key conclusions were drawn:

1. Sustainable entrepreneurship education significantly impacts the entrepreneurial mindset of students, suggesting that a well-designed and practical entrepreneurship curriculum, particularly one that integrates sustainability concepts, can effectively shape students' entrepreneurial thinking. This implies that by enhancing sustainability-focused content in entrepreneurship courses, students are more likely to develop innovative and opportunity-driven mindsets essential for creating value in business ventures.
2. Self-efficacy has a strong and positive effect on students' entrepreneurial mindset, indicating that students who believe in their ability to succeed in entrepreneurial tasks are more inclined to adopt entrepreneurial thinking. This finding aligns with existing literature emphasizing that self-confidence and personal capability play a crucial role in entrepreneurial behavior and decision-making.
3. Sustainable entrepreneurship education also influences students' entrepreneurial attitudes, confirming that exposure to sustainability in entrepreneurship education not only shapes students' mindsets but also positively influences their willingness to engage in entrepreneurial activities. This suggests that integrating sustainable business practices into the learning process can cultivate a proactive and socially responsible entrepreneurial attitude.
4. Self-efficacy positively impacts entrepreneurial attitudes, further reinforcing that students with higher self-efficacy are more likely to develop a positive attitude toward entrepreneurship. This finding highlights the importance of nurturing students' belief in their own entrepreneurial abilities as a way to foster both mindset and attitude development.

5. Entrepreneurial attitude significantly influences the entrepreneurial mindset, showing that students with a more favorable attitude toward entrepreneurship are more likely to embrace an entrepreneurial mindset. This reinforces the idea that attitude and mindset are interconnected, with a positive entrepreneurial attitude reinforcing students' confidence in their entrepreneurial abilities.
6. The mediating role of entrepreneurial attitude between sustainable entrepreneurship education and entrepreneurial mindset was not significant, indicating that while entrepreneurial education directly impacts the mindset, the role of attitude as a mediator remains limited. Thus, entrepreneurship education continues to directly foster the entrepreneurial mindset without relying on attitude as an intermediary variable.
7. Conversely, entrepreneurial attitude partially mediates the relationship between self-efficacy and entrepreneurial mindset, suggesting that self-efficacy not only influences the mindset directly but also through fostering a positive entrepreneurial attitude. This complementary mediation underscores the importance of building both self-confidence and attitude to effectively develop a strong entrepreneurial mindset.

In conclusion, the findings provide valuable insights into how sustainable entrepreneurship education and self-efficacy contribute to shaping students' entrepreneurial mindset and attitude. These results highlight the importance of fostering both sustainability and personal confidence in entrepreneurship education to enhance students' readiness for entrepreneurial endeavors. Future research is recommended to explore additional mediating or moderating variables, such as motivation or external support, to provide a more comprehensive understanding of the dynamics between education, self-efficacy, and entrepreneurial development.

5.1. Suggestions

Based on the results of this research, the researcher offers several suggestions, as this study still has some limitations in certain aspects, which should be improved in future research. The suggestions are as follows:

1. Since entrepreneurship education influences the entrepreneurial mindset, the researcher recommends that higher education institutions improve their entrepreneurship curricula. This could include increasing the weight of entrepreneurship-related courses, such as advanced entrepreneurship courses, inviting experts to share their experiences with students, organizing events that showcase student entrepreneurial products, and sending students for internships in entrepreneurial industries.
2. Since self-efficacy influences the entrepreneurial mindset, the researcher suggests that the management of private universities in West Jakarta facilitate students' entrepreneurship efforts by helping them connect with investors, introducing them to small and medium enterprises (SMEs), and collaborating with entrepreneurial associations to foster young entrepreneurs within the university environment.
3. Since entrepreneurial attitude influences the entrepreneurial mindset, the researcher suggests that the management of private universities in West Jakarta cultivate entrepreneurial attitudes by involving students in various entrepreneurship events, encouraging participation in competitions such as student scientific week, and fostering a culture of innovation.

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