

ENTREPRENEURSHIP EDUCATION AND GENERATION Z: MEDIATING EFFECTS OF EMOTIONS AND ORIENTATION ON ENTREPRENEURIAL INTENTIONS

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ABSTRACT

In order to reach the goal of Indonesia Emas 2045, it is very important to support small and medium-sized businesses, known as MSMEs. However, looking at the unemployment rate in Indonesia, which is 7.99 million people, we see that many people still have a hard time finding jobs, even though they could start their own businesses. This research wants to look at how teaching entrepreneurship can boost the desire to become an entrepreneur, with the help of entrepreneurial mindset and positive feelings among university students. This research is a type of study that can be confirmed. The group of people studied in this research includes undergraduate students from Maranatha Christian University, and the sample includes 172 students who are currently taking or have already taken entrepreneurship classes. The way the samples were chosen was through a method called non-probability sampling with purposive sampling, and information was gathered by handing out surveys. The data collected were analyzed using the Smart PLS software. The study's findings show that education in entrepreneurship does not have a direct effect on the desire to become an entrepreneur. However, entrepreneurship education does positively affect feelings and the entrepreneurial mindset. Therefore, the study concludes that education in entrepreneurship influences the desire to become an entrepreneur, with the help of an entrepreneurial mindset and positive feelings. The results of this research highlight how important these four factors are in the world of entrepreneurship.

Keywords: Entrepreneurial Education, Entrepreneurial Intentions, Entrepreneurial Orientation, Positive Emotions.

INTRODUCTION

Empowerment and entrepreneurial development have become crucial and a primary focus for the government, particularly concerning the optimistic target for Indonesia's progress in the coming years, namely "Indonesia Emas 2045." This hopeful vision can create new business opportunities and contribute to the welfare of society by opening up job opportunities. One of the pillars of Indonesia's 2045 vision is economic development. To achieve this

vision, the role of MSMEs is now highly needed. However, data shows that the unemployment rate in Indonesia remains high. According to Badan Pusat Statistik, the unemployment figure reached 7.99 million people in 2023. This indicates that many individuals are still seeking jobs while available positions are limited. Yet, these job seekers have the potential to create their own employment opportunities through entrepreneurship. Aside from capital-related issues, as long as individuals have a strong desire, the chance to start their own businesses should be wide open. Essentially, anyone can become an entrepreneur. From this discussion arises the question of how many individuals, especially university students, desire or intend to pursue entrepreneurship. This is relevant to their career path after graduation—whether they will work for a company or choose to become entrepreneurs. Is there a connection between entrepreneurial intention and entrepreneurial orientation, entrepreneurship education, and positive emotions? To address these questions, the researchers conducted a preliminary survey involving 30 students from various faculties at Maranatha Christian University (MCU). MCU was chosen because it has faculties that include courses related to business or entrepreneurship. The preliminary survey results revealed an average entrepreneurial intention score of 3.38 (67.6%), indicating room for improvement. In terms of entrepreneurship education across several MCU faculties, the average score was 4.11 (82.2%). Entrepreneurial orientation scored 3.80 (76%), while positive emotions related to starting a business averaged 3.95 (79%). All these percentages are below 100%, indicating potential for further enhancement. The preliminary findings suggest that while education is provided adequately, entrepreneurial intention among students remains low. If we consider the age group of these students, the majority of Indonesia's population is dominated by young people. As shown in Table 1, individuals aged 20–24 years make up 13.55% of the population. This demonstrates that the younger generation, including university students, holds significant potential to drive economic growth by creating job opportunities.

Table 1. Population by Age Group and Gender in 2022

Age Group	Male	Female	Total
15-19	11.432.900	10.730.600	22.163,500
20-24	11.553.100	10.937.300	22.490.400
25-29	11.485.800	10.977.900	22.463.700
30-34	11.215.400	10.851.400	22.066.800
35-39	10.743.300	10.504.700	21.248.000
40-44	10.207.100	10.088.100	20.295.200
45-49	9.378.500	9.348.800	18.727.200
50-54	8.240.700	8.259.600	16.500.300

Source: Statistics Indonesia (2018)

One way to tackle unemployment and enhance individuals' entrepreneurial intentions is by improving the quality of Indonesia's human resources. The human resources quality, particularly in understanding the mechanisms of a sound economic system, can be improved through the performance of MSMEs, with such understanding being fostered in higher

education institutions. Universities can serve as platforms for entrepreneurial education and orientation. These elements—entrepreneurial education and orientation—are key factors influencing individuals' desire to engage in entrepreneurial activities. Several studies, such as those by (Suandi & Suwarno, 2022) and (Apriliana & Suwarno, 2023), have demonstrated that education of entrepreneurship plays a role in influencing intention of entrepreneurship among students. However, findings from (Mukhtar et al., 2021) did not reveal relationship between these two variables, aligning with (Duong, 2022), who also said that entrepreneurship education doesn't directly impact a person's desire to become an entrepreneur. These differing results indicate that there is still some confusion about how entrepreneurship education relates to a person's entrepreneurial goals. According to (Suwarno et al., 2023), pointed out that boosting someone's entrepreneurial drive needs more than just learning about entrepreneurship; the attitude of students towards entrepreneurship plays an important role too. This finding corresponds with the study by (Hassan et al., 2021), where they discovered a strong link between having a good entrepreneurial mindset and a greater desire to start a business. Similarly, (Twum et al., 2021) found that decision-making, which is part of personal entrepreneurial mindset, affects entrepreneurial goals. However, Koe in (Suwarno et al., 2023) mentioned that one aspect of the individual entrepreneurial mindset—how much risk a person is willing to take—does not affect their entrepreneurial goals. Furthermore, (Perez et al., 2024) reported no significant difference between entrepreneurial orientation and entrepreneurial intentions.

Although prior studies have showed that entrepreneurial intentions can be enhanced through orientation and education, positive emotions may also influence their relationship, adding complexity to understanding this phenomenon. For instance, (Apriliana & Suwarno, 2023) found that positive emotions could affect individuals' desire to pursue entrepreneurship. However, contrasting results were reported by (Chen et al., 2021). These results show the need for further research to explore how entrepreneurial orientation and education in universities can effectively increase intention of entrepreneurship. Such research should consider the role of positive emotions as a mediator, which may be key to fostering a strong entrepreneurial desire and achieving success in establishing, growing, and sustaining a business as an entrepreneur.

Entrepreneurship Education

Several studies have defined education of entrepreneurship. It is conceptualized as a learning process designed to convey knowledge, enhance skills, and foster attitudes related to entrepreneurship. Its ultimate goal is generally to create new businesses, strengthen innovation, and develop high-quality human resources (Efrata et al., 2021). (Anwar et al., 2021) stated that in-depth knowledge of entrepreneurial processes can be gained through participation in various programs and training aimed at boosting self-confidence and shaping a mindset conducive to entrepreneurial processes. Similarly, (Nguyen & Nguyen, 2023) highlighted that entrepreneurship education can serve as an effective platform for enhancing basic entrepreneurial skills, such as optimism, enthusiasm, competitive resilience,

and the ability to utilize resources effectively. From these three definitions, it can be concluded that education of entrepreneurship plays a significant role in shaping individuals into quality entrepreneurs. Through entrepreneurship education, individuals can acquire the skills, knowledge and attitudes necessary to manage and start a business effectively. The primary objectives of entrepreneurship education include fostering innovation, creating new businesses, and producing human resources capable of competing in the marketplace. Additionally, it aims to enhance fundamental entrepreneurial capabilities, such as self-confidence and optimism.

Entrepreneurial Orientation

Entrepreneurial orientation is a factor that can influence decision-making in entrepreneurship, with certain elements within this orientation determining the success or failure of a business endeavor. According to Nizam in (Utami & Umami, 2023), entrepreneurial orientation is a condition in which individuals tend to implement innovation, act proactively, and have a willingness to take risks to start or run a business. (Koe, 2016), referencing Miller's 1983 concept, explains that entrepreneurial orientation can be assessed based on three dimensions: proactiveness, innovation, and risk-taking. (Suwarno et al., 2023) further describe entrepreneurial orientation as a process of entrepreneurial activities within an organization, encompassing innovation, competitive aggressiveness, proactiveness, risk-taking, achievement orientation, and learning orientation. These activities improve performance of organization and help achieve its goals. According to Bolton and Lane (Anggadwita et al., 2021), innovation refers to an individual's creativity in providing solutions to problems and opportunities, aimed at improving and producing new products for existing or new markets. Proactiveness, on the other hand, is defined as an entrepreneur's readiness to lead in facing competitors by introducing new products or services ahead of others, as well as anticipating future demands amidst changing conditions. Meanwhile, risk-taking is one of the main functions of orientation of entrepreneurship, assessing an entrepreneur's courage to take calculated risks in an often-uncertain environment. Based on these definitions, entrepreneurial orientation can be understood as the attitudes and behaviors of individuals in running a business. It emphasizes three main dimensions: innovation, proactiveness, and risk-taking.

Positive Emotions

Emotions play a crucial role in the entrepreneurial process, particularly in the early stages of starting a business (Cacciotti et al., 2016). Feeling good and positive when completing a targeted task reflects a state of positive emotion. Positive emotions can make a person's mind more open and encourage them to think creatively. When someone is in a positive emotional state or feeling happy, they are more likely to develop new ideas, try unconventional ways, and achieve their goals more easily (Chen et al., 2021). (Zhao & Xie, 2020) explained that positive emotions in the context of entrepreneurship result from optimistic assessments, whereas negative emotions in entrepreneurship arise when individuals exhibit excessive confidence. A study by Chen et al in (Othman & Othman, 2021) indicated that positive emotions, such as a sense of

well-being, significantly influence motivation to enhance one's abilities, making them more competitive and effective in seizing opportunities to start new businesses or expand existing ones. Thus, emotions play a critical role in the process of entrepreneurship, especially during the stages of starting or growing a business. Positive emotions, characterized by feelings of joy and happiness, contribute to an individual's creativity and productivity. When individuals experience positive emotions, they are more likely to generate new ideas, take risks, and effectively achieve their goals.

Entrepreneurial Intentions

Intention of entrepreneurship can be described as the desire to start a company driven by a strong sense of ambition (Adekiya & Ibrahim, 2016). Krueger and Carsrud in (Youssef et al., 2021) define entrepreneurial intentions means a person's decision to begin their own business. Similarly, (Suwarno et al., 2023) describe entrepreneurial intentions as the commitment and willingness to undertake entrepreneurial actions and initiate a business. Entrepreneurial intension is regarded as the essential cognitive condition that motivates individuals aspiring to establish new enterprises (Atiq et al., 2020). Ridha et al. (2017) further explain that intentions essentially represent the readiness to engage in an activity, as outlined in the theory of planned behavior (TPB). This theory highlights an individual's preparedness to take specific actions based on cognitive understanding and readiness to act. From these definitions, entrepreneurial intentions can be understood as the readiness and strong desire to start a business, accompanied by an individual's commitment to participating in business activities.

Positive Emotions and Entrepreneurship Education

According to (Ivanova et al., 2018), positive feelings about oneself are affected by a person's skills or natural inclinations as an entrepreneur. It is important for people who want to be entrepreneurs to create good plans that encourage and enhance entrepreneurial activities. This includes knowing the different kinds of emotions they might feel, both good and bad. Additionally, learning about entrepreneurship can greatly influence how future entrepreneurs feel emotionally. For instance, it may boost confidence and motivation or, conversely, increase levels of stress and anxiety. Learning about entrepreneurship can help students feel more emotionally positive about entrepreneurship, thereby motivating them to start businesses and succeed in the field (Othman & Othman, 2020). This statement is reinforced by (Othman et al., 2023), who showed that education of entrepreneurship has a positive influence on positive emotions. Thus, the following hypothesis is proposed:

H1: Entrepreneurship education impact positive emotions.

Entrepreneurship Education and Orientation of Entrepreneurship

Learning about business startups plays a big part in encouraging people to think like entrepreneurs. This is because education about starting a business is very important for developing an entrepreneurial mindset, which can be used to solve problems faced by entrepreneurs (Bismala et al., 2022). Entrepreneurial orientation can be developed through education of

entrepreneurship, and most findings suggest that entrepreneurship learning approaches positively affect entrepreneurial orientation (Bello et al., 2022). In the study by (Suwarno et al., 2023), it was concluded that entrepreneurship education can influence entrepreneurial orientation. Furthermore, entrepreneurship education also serves as a key predictor of entrepreneurial orientation (Amenah et al., 2024; Cho & Lee, 2018; Efrata et al., 2021; Yang, 2020). Based on the findings from several researchers, the hypothesis statement is proposed:

H2: Entrepreneurship education influences orientation of entrepreneurship.

Positive Emotions and Entrepreneurial Intentions

The relationship between intention of entrepreneurship and positive emotions can be explained based on several studies that have addressed this topic. (Zampetakis et al., 2016) explained that entrepreneurial motivation can be enhanced through positive emotions anticipated by individuals. Additionally, (Apriliana & Suwarno, 2023) suggested that positive emotions can increase entrepreneurial intentions. (Zhao & Xie, 2020) also highlighted in their research that positive emotions in entrepreneurship significantly and positively impact entrepreneurial intentions. This is because positive emotions in entrepreneurship serve as an initial source of motivation, helping to connect awareness with intentions and entrepreneurial actions. The business world is characterized by complexity and dynamism, and thus, (Chen et al., 2021) stated that having positive emotions can benefit entrepreneurs when facing complex problems or challenges. As a result, individuals with positive emotional conditions will find it easier to develop ideas, solve problems, and, most importantly, be more willing to try new methods. According to what past research has shown, we suggest this hypothesis:

H3: Positive emotions influence entrepreneurial intentions.

Entrepreneurial Orientation and Entrepreneurial Intentions

Entrepreneurial orientation is linked to entrepreneurial intentions. Individuals are unlikely to engage in activities of entrepreneurship unless they have the foundation of entrepreneurial orientation, such as the readiness to take risks, innovate, and be proactive. Thus, there is a positive relationship between orientation and intention of entrepreneurship (Ibrahim & Mas'ud, 2016). Similarly, (Santoso & Oetomo, 2016) argued that entrepreneurial orientation affects entrepreneurial intentions because most young entrepreneurs who run their own businesses are not motivated by managerial skills or business competence, but by their drive to take risks, innovate, and their proactive attitude in facing competitors and the rapidly changing economic environment. Statistically, the relationship between orientation and intention of entrepreneurship is significant (Chienwattanasook et al., 2019; Hassan et al., 2021; Ibrahim & Igwe Lucky, 2014; Ismail et al., 2015; Koe, 2016; Olutuase et al., 2018; Owusu et al., 2022; Zaid, et al. 2025). The following hypothesis aligns with this statement:

H4: Entrepreneurial orientation impact entrepreneurial intentions.

Entrepreneurship Education and Entrepreneurial Intentions

A lot of researchers have investigated how wanting to start a business relates to learning about entrepreneurship. For example, a study by (Bae et al., 2014) found that people who learned about entrepreneurship were more likely to want to start their own businesses. Also, another study compared people who took formal entrepreneurship classes to those who didn't, and it showed that those who had the classes were more eager to launch a business (Cera et al., 2020). In addition, learning about entrepreneurship also greatly helps people in wanting to become entrepreneurs (Astiana et al., 2022; Al-Omar et al., 2024; Farahdiba et al., 2024; Malinda et al., 2024; Montes, et al., 2023; Ngo et al., 2024; Saleh & R, 2024; Yanling & Hock, 2023; Yasa et al., 2023). Based on this, we suggest the following hypothesis:

H5: Entrepreneurship education influences entrepreneurial intentions.

Entrepreneurship Education, Positive Emotions, and Intention of Entrepreneurship

Increasing entrepreneurial intentions can be influenced by several factors, both external support and internal factors within the individual. Entrepreneurial intentions tend to be higher when students have received entrepreneurship education, understood it, and possess positive emotions. Several researchers have demonstrated that external support, such as education of entrepreneurship, can enhance students' desire to pursue entrepreneurship (Bae et al., 2014). Moreover, internal support, such as positive emotions, can further enhance these intentions (Zhao & Xie, 2020). A study by (Apriliana & Suwarno, 2023) also highlighted that positive emotions play a crucial role as a mediator between education and intention of entrepreneurship. The hypothesis is proposed:

H6: There is an effect of entrepreneurship education on entrepreneurial intentions mediated by positive emotions.

Entrepreneurship Education, Orientation of Entrepreneurship, and Entrepreneurial Intentions

Not only is education of entrepreneurship an external support that can increase entrepreneurial intentions, but internal support, such as entrepreneurial orientation, is also necessary. Entrepreneurial intentions may be higher if students have received and understood entrepreneurship education, along with the courage to take risks when they want to run their business. This statement is supported by research from (Devi, 2017), which found that entrepreneurship education becomes more effective in fostering entrepreneurial interest when paired with an entrepreneurial orientation. (Hutasuhut et al., 2024) discovered that having an entrepreneurial mindset is an important middle step. This suggests that learning about entrepreneurship helps boost students' desire to start their own businesses when they are creative, competitive, and ready to take chances. Furthermore, (Otahe et al., 2022) noted that after studying entrepreneurship, students showed a notable rise in both their entrepreneurial mindset and their education in the subject. Based on this, we suggest the following hypothesis:

H7: There is an effect of entrepreneurship education on entrepreneurial intentions mediated by orientation of entrepreneurship.

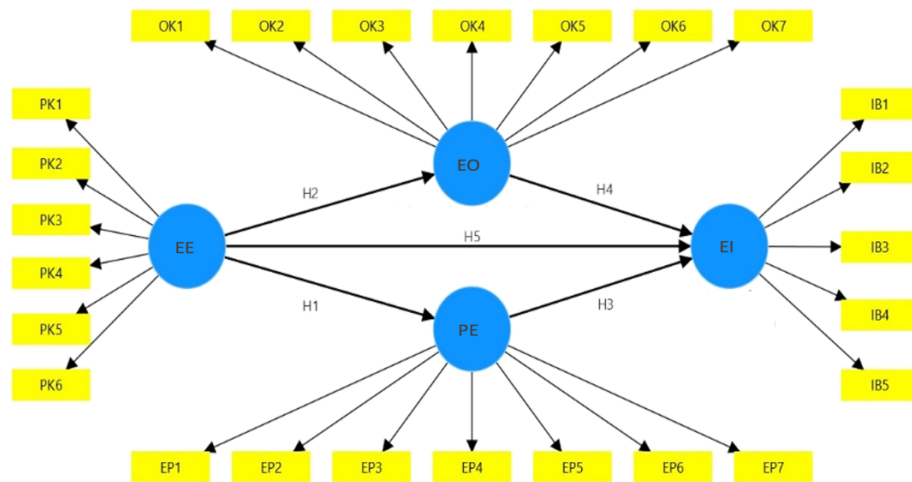


Figure 1. Research Model
Source: data processed (2024)

RESEARCH METHOD

This kind of research is a verification study that looks at how entrepreneurship education impacts the desire to start a business, with the influence of entrepreneurial mindset and positive feelings among university students. Verification research is designed to analyze how one factor affects another factor (Sugiyono, 2013). In this case, entrepreneurship education is the factor that stands alone, while entrepreneurial mindset and positive feelings are the connecting factors, and the desire to start a business is the factor that is affected. From this, we can see that the connections between the factors in this study suggest a cause-and-effect dynamic, meaning that the independent factors can change the dependent factor (Darna & Herlina, 2018).

This research is classified as quantitative research. Quantitative methods involve data collection based on a specific population and sample using various data analysis techniques and research instruments that are statistical and quantitative in nature (Sugiyono, 2018). The method for choosing participants is called non-probability sampling and it uses a purposive sampling technique. According to (Lenaini, 2021), non-probability sampling means that every person in the group does not have the same opportunity to be included in the sample. So, purposive sampling is a way to pick the sample based on specific reasons or guidelines set by the researcher, focusing on which sample best represents the larger group determined by the researcher, specifically which sample is most representative and considered to represent the population. The criteria for the sample are undergraduate students from various faculties at Maranatha Christian University (MCU) who are currently or have already taken entrepreneurship education. The sample criteria can be seen in Table 2 regarding the question of whether they have ever taken entrepreneurship education at the university. Data was gathered by sending out online surveys to

a number of students from Maranatha Christian University who participated. The study focused on the group of undergraduate students at MCU, totaling 5,296 students. The Slovin formula was used with a 10% margin of error, the sample size is calculated to be 98 people. Although the minimum sample size is 98 people, the researcher managed to distribute the questionnaire to 172 respondents who met the criteria of being undergraduate students at MCU currently or previously enrolled in entrepreneurship education. This sample size is based on the recommendation from (Hair et al., 2006), which states that the sample size for Maximum Likelihood Estimation (MLE) should range from 100 to 200 samples. The expected sample size is a minimum of 100 samples and a maximum of 200 samples.

The tool for measuring in this study is a scale. The scale is a 5-point Likert scale that goes from Strongly Disagree to Strongly Agree. The survey is divided into five parts, which cover information about the respondents, their education in entrepreneurship, how they feel about entrepreneurship, their positive feelings, and their plans to be entrepreneurs. In this study, entrepreneurship education includes six items adapted from (Budiarti, 2012) dan (Anggraeni & Nurcaya, 2016) with three dimensions: content, objectives, and teaching methods. An example of an item is: "The entrepreneurship education in the faculty provides knowledge and insight about the business world." Entrepreneurial orientation consists of seven items, adapted from (Bolton & Lane, 2012), with three dimensions: proactivity, innovation, and risk-taking. An example of an item is: "I like to try new things boldly." Positive emotions include seven items adapted from (Zampetakis et al., 2016), (Foo, 2011), dan (Watson et al., 1988), with three dimensions: pleasure or enjoyment, enthusiasm, and interest. An example of an item is: "I feel excited when invited by a colleague to collaborate on starting a business." Entrepreneurial intentions consist of five items, adapted from (Anggraeni & Nurcaya, 2016), (Darmanto, 2016), dan (Mat et al., 2015), with two dimensions: perceived desire and tendency to act. An example of an item is: "I am likely to choose a career as an entrepreneur after graduation."

Following the gathering of information from participants, the information was handled and scrutinized through the utilization of the Partial Least Squares (PLS) Program. PLS is a predictive technique or estimation process that can handle multiple independent variables (Wold, 1980). The testing was conducted in two steps: first, the measurement model testing, which included reliability testing using Cronbach's Alpha and Composite Reliability tests. In addition, construct validity was tested using the outer loading test. The second step involved structural model testing to determine whether there is an influence between the variables.

RESULTS AND DISCUSSION

Characteristics of Research Respondents

The responses from this research were analyzed and reviewed to identify the characteristics of respondents from each observed sample group. Based on gender, there are 68 males and 104 females. In terms of age, the majority of respondents are 20 years old, with 52 individuals in this age group. Among all

respondents, most do not have a business and have either taken or are currently taking courses related to entrepreneurship, such as relevant subjects, business practices, entrepreneurship seminars, or even preparing business plan reports. You can find the profile of the respondents who answered the questions in the table 2.

Tabel 2. Characterstic of Respondents (n=172)

Demographic	Number	Percentage
Gender		
Male	68	39.5%
Female	104	60.5%
Age		
<19	40	23.3%
20 - 22	122	70.9%
23>	10	5.8%
Faculty		
HBD	121	7.3%
TRC	18	10.5%
HIK	13	7.6%
Medicine	6	3.5%
Dentistry	1	1%
Psychology	13	7.6%
Major		
Management	96	55.8%
Accounting	15	8.7%
Law	10	5.8%
Civil Engineering	2	1.2%
Informatic Engineering	2	1.2%
Industrial Engineering	9	5.2%
Electrical Engineering	1	0.6%
Information System	4	2.3%
English	3	1.7%
Japanese	4	2.3%
Chinese	1	0.6%
Interior Design	2	1.2%
Visual Communication	3	1.7%
Design		
Medicine	6	3.5%
Dentistry	1	0.6%
Psychology	13	7.6%
Have a Business		
Yes	37	21.5%
No	135	78.5%

Demographic	Number	Percentage
Have Taken Entrepreneurship Education		
Yes	172	100%
No	0	0%

Source: data processed (2024)

Notes:

FHBD = Faculty of Law and Digital Business (Major: Management; Accounting; Law)

FTRC = Faculty of Engineering and Smart Systems (Major: Civil Engineering; Informatics; Industrial Engineering; Electrical Engineering; Information Systems)

FHIK = Faculty of Humanities and Creative Industries (Major: English Literature; Japanese Literature; Chinese Literature; Interior Design; Visual Communication Design)

Descriptive Analysis of Research Variables

This study that explains things seeks to look at the average, how stretched out, and how spread out the numbers are for each thing being measured. The answers from the math tests that explain things are shown in the chart called Table 3.

Table 3. Descriptive Statistics

No.	Indicator	Mean	Skewness	Standard Deviation
1.	PK1	4.302	-0.992	0.732
2.	PK4	4.029	-0.712	0.838
3.	PK5	4.221	-0.986	0.791
4.	PK6	4.157	-1.042	0.773
5.	OK1	3.959	-0.611	0.872
6.	OK3	3.779	-0.514	0.993
7.	OK4	4.017	-0.847	0.866
8.	OK5	3.872	-0.391	0.912
9.	OK6	3.988	-0.610	0.849
10.	OK7	3.948	-0.711	0.884
11.	EP1	4.035	-0.947	0.862
12.	EP2	4.105	-1.105	0.836
13.	EP3	3.878	-0.560	0.923
14.	EP4	3.651	-0.410	1.081
15.	EP7	4.041	-1.031	0.948
16.	IB2	3.657	-0.189	1.036
17.	IB3	3.727	-0.338	1.040
18.	IB4	3.866	-0.467	1.000
19.	IB5	4.256	-1.338	0.865

Measurement Model Testing

The way of measuring things in this research was checked using an outer model check. This checking looks at what came from checking how different things are (DV), how similar things are (CV), how consistent the combined scores are (CR), and Cronbach's Alpha (CA). The details for each check of the outer model are given here.

Outer Model Analysis

The measurement used needs to be evaluated to determine whether it is appropriate, and its reliability and validity must be analyzed. The reliability and validity tests for the measurement used are conducted in this outer model analysis. You can see the test results in the next picture, Figure 2.

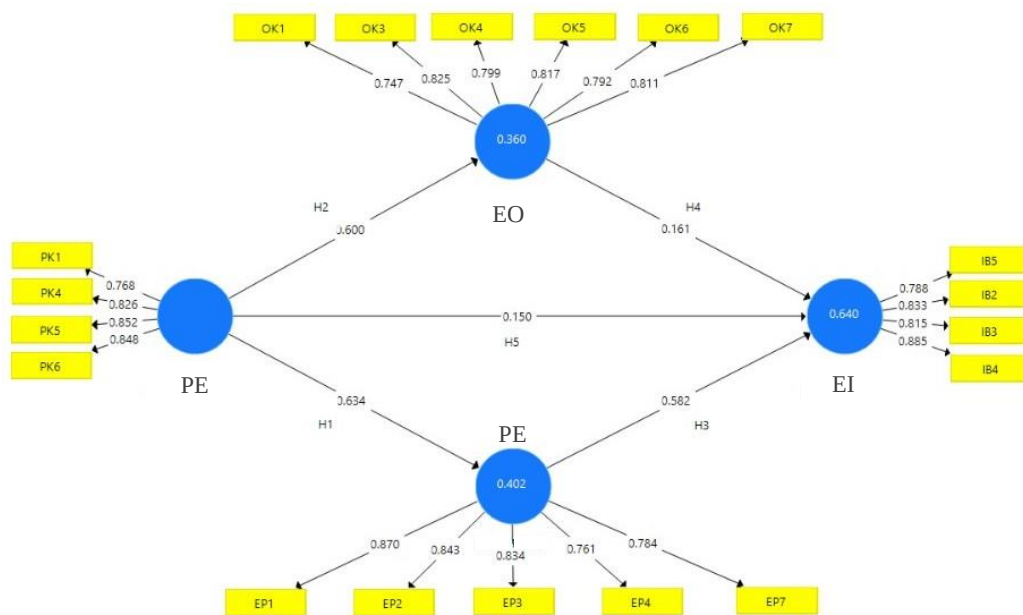


Figure 2. Outer Model
Source: data processed (2024)

Convergent Validity Test

The relationship between indicators is tested for validity through convergent validity testing. To determine whether each relationship between indicators is valid, this study uses the outer loading method. Outer loading helps researchers to see the extent of the correlation between each item being measured and its construct. According to (Hair et al., 2014), an indicator supports its convergent validity when each indicator has an outer loading above 0.70.

Table 4. Convergent Validity

No.	Indicator	Entrepreneurship Education	Entrepreneurial Orientation	Positive Emotions	Entrepreneurial Intentions
1.	PK1	0.768			
2.	PK4	0.826			
3.	PK5	0.852			

No.	Indicator	Entrepreneurship Education	Entrepreneurial Orientation	Positive Emotions	Entrepreneurial Intentions
4.	PK6	0.848			
5.	OK1		0.747		
6.	OK3		0.825		
7.	OK4		0.799		
8.	OK5		0.817		
9.	OK6		0.792		
10.	OK7		0.811		
11.	EP1			0.870	
12.	EP2			0.843	
13.	EP3			0.834	
14.	EP4			0.761	
15.	EP7			0.784	
16.	IB2				0.833
17.	IB3				0.815
18.	IB4				0.885
19.	IB5				0.788

In the table above, the convergent validity using the outer model method has met the requirements, as the values of all indicators are >0.7 . Thus, all items or indicators can be used as variables in the study and demonstrate the validity of each relationship between the tested indicators. Based on the factor loading, the highest item score for the Entrepreneurship Education variable is PK5, which is about "entrepreneurship education in the faculty raises awareness of business opportunities" with a score of 0.852, while the lowest score is PK1, which is about "entrepreneurship education in the faculty provides knowledge and insight about the business world." The highest factor loading for the Entrepreneurial Orientation variable is OK3, which is about "I tend to act 'boldly' or 'recklessly' in situations where there is a risk that might occur" with a score of 0.825, while the lowest score is OK1, about "I like to try new things boldly." For Positive Emotions (EP1), the highest score is 0.870, which is about "if there is a big opportunity, I will immediately take that opportunity and start a business," while the lowest score is EP4, about "whenever I think about starting a business, I do not feel doubt or worry about failure or bankruptcy." Lastly, for Entrepreneurial Intentions (IB4), the highest factor loading is 0.885, which is about "I prefer to create my own job rather than being an employee at another company," while the lowest score is IB5, about "having my own business is something fun and proud."

Discriminant Validity Test

This test aims to analyze how accurately an item performs its measurement function when used in research (Ghozali, 2016). Discriminant validity measurement can be assessed based on the Fornell-Larcker test to examine the AVE score on constructs and from the cross-loading test to compare the value of indicators within each construct against indicators in

other constructs (Sekaran & Bougie, 2016). The minimum acceptable AVE value is greater than 0.5 (Hair et al., 2014). Several indicator variables were removed because their values were lower than 0.5. The indicators in question include 2 indicators from the Entrepreneurship Education variable, 1 indicator from the Entrepreneurial Orientation variable, 2 indicators from the Positive Emotions variable, and 1 indicator from the Entrepreneurial Intentions variable. The results of the cross-loading and Fornell-Larcker tests can be seen in Table 5 and Table 6.

Table 5. Discriminant Validity

No.	Variable	AVE
1.	Entrepreneurship Education (EE)	0.679
2.	Entrepreneurial Orientation (EO)	0.638
3.	Positive Emotions (PE)	0.672
4.	Entrepreneurial Intentions (EI)	0.690

Source: data processed (2024)

Table 5 shows that the number for Entrepreneurship Education's AVE is 0.679. The variables that help connect other variables, specifically Entrepreneurial Orientation and Positive Emotions, have AVE numbers of 0.638 and 0.672, correspondingly. At the same time, the Entrepreneurial Intentions variable has an AVE number of 0.690. Looking at the numbers for each variable, we can say that all variables are good enough because they are more than the needed amount.

Table 6. Fornell Larcker

No.	Variable	Positive Emotions	Entrepreneurial Intentions	Entrepreneurial Orientation	Entrepreneurship Education
1.	Positive Emotion	0.820			
2.	Entrepreneurial Intentions	0.775	0.831		
3.	Entrepreneurial Orientation	0.607	0.604	0.799	
4.	Entrepreneurship Education	0.634	0.615	0.600	0.824

Source: data processed (2024)

Cronbach's Alpha and Composite Reliability

Checking how dependable something is means looking at the outcomes of both composite reliability and Cronbach's Alpha. Cronbach's Alpha lets researchers make sure that every question they use is reliable and stays the same. The numbers from Composite Reliability and Cronbach's Alpha must be 0.7 or more to be seen as acceptable (Hair et al., 2019).

Table 7. Composite Reliability and Cronbach's Alpha

No.	Variable	Composite Reliability	Cronbach's Alpha
1.	Entrepreneurship Education	0.894	0.843
2.	Entrepreneurial Orientation	0,914	0,886
3.	Positive Emotions	0,911	0,878
4.	Entrepreneurial Intentions	0,899	0,850

Source: data processed (2024)

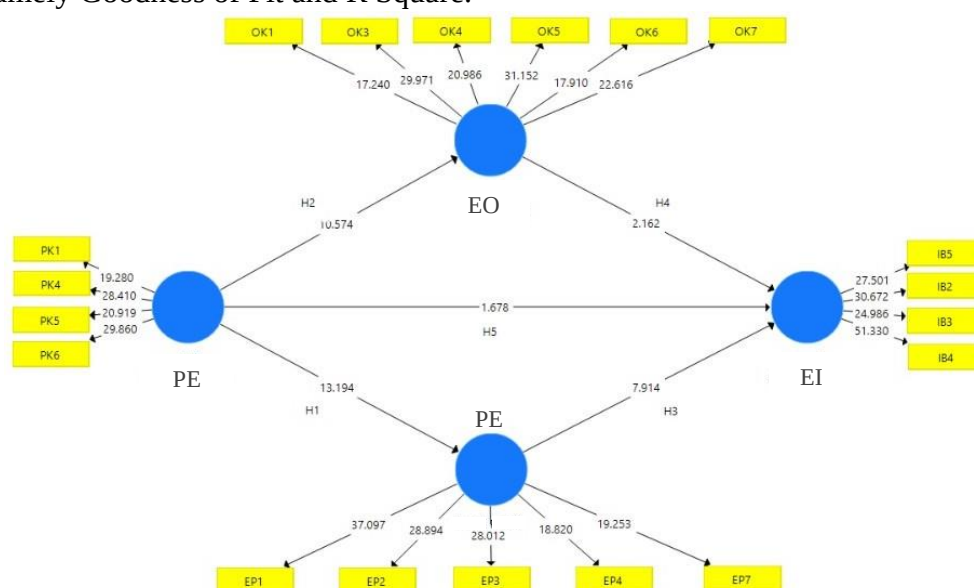
The results of Composite Reliability, as shown in Table 7, indicate that all tested variables are reliable, as they have scores above the required threshold. The scores range from 0.894 to 0.914. The results of Cronbach's Alpha also show that all tested variables are reliable, as their scores are above the required threshold. The scores range from 0.843 to 0.886.

Structural Model Testing

Once you have looked at the outside structure, the next thing to do is look at the inside structure. When we test the inside structure, we check how well it all works together, the overall fit, and the amount of change explained (also known as the R-squared test), and finally, the calculation of the T-Test (also known as hypothesis testing). The results of these various inner model calculations will be explained as follows.

Inner Model Analysis

An overview of the relationships between latent variables can be seen in the inner model testing. This testing uses at least two measurement tools, namely Goodness of Fit and R Square.

**Figure 3.** Inner Model

Source: data processed (2024)

Good of Fit Test

The Goodness of Fit test checks how well the model works, using the GoF Index to measure this. This index shows a starting point for judging the model, with values that go from 0 to 1. For the SRMR, which stands for Standardized Root Mean Square Residual, the accepted value should be lower than 0.10. In the case of the NFI, or Normal Fit Index, the value should also be between 0 and 1. A value that is closer to 1 means the model works well with the data we see. You can find all the details in Table 9.

Table 8. GoF Test

No.		Saturated Model	Estimated Model
1.	SRMR	0.068	0.095
2.	d_ULS	0.880	1.700
3.	d_G	0.421	0.445
4.	Chi-Square	402.815	411.725
5.	NFI	0.811	0.807

Source: data processed (2024)

Coefficient Determination (R²)

R Square is needed to determine how much the endogenous variables are influenced by other variables that are not explained in this study. The results of the R Square calculation are presented in Table 9.

Table 9. R Test

No.		R-Square	R-Square Adjusted
1.	Positive Emotions	0.402	0.399
2.	Entrepreneurial Intentions	0.640	0.634
3.	Entrepreneurial Orientation	0.360	0.356

No.		Saturated Model	Estimated Model
1.	SRMR	0.068	0.095
2.	d_ULS	0.880	1.700
3.	d_G	0.421	0.445
4.	Chi-Square	402.815	411.725
5.	NFI	0.811	0.807

Source: data processed (2024)

After conducting the R Test, it was found that the Entrepreneurial Orientation variable is influenced by Entrepreneurship Education, Positive Emotions, and Entrepreneurial Intentions by 36%. Entrepreneurial Intentions are influenced by Entrepreneurship Education and Positive Emotions by 64%. Meanwhile, the Positive Emotions variable is influenced by Entrepreneurship Education by 40%.

Hypothesis Testing

The hypothesis testing section evaluates whether a hypothesis is significant or not by looking at the T-Statistic scores and P-Values. The results of the hypothesis testing are summarized in Table 10.

Table 10. T Test (Hypothesis Testing)

Hypothesis	The Influence of Each Variable	Original Sample	T-Statistic	P-Values	Description
H1	Entrepreneurship Education → Positive Emotions	0.634	12.887	0	Significant
H2	Entrepreneurship Education → Entrepreneurial Orientation	0.600	9.915	0	Significant
H3	Positive Emotions → Entrepreneurial Intentions	0.582	7.470	0	Significant
H4	Entrepreneurial Orientation → Entrepreneurial Intentions	0.161	2.129	0.034	Significant
H5	Entrepreneurship Education → Entrepreneurial Intentions	0.150	1.759	0.079	No Significant
<i>Specific Indirect Effect</i>					
H6	Entrepreneurship Education → Positive Emotions → Entrepreneurial Intentions	0.369	5.980	0	Significant
H7	Entrepreneurship Education → Entrepreneurial Orientation → Entrepreneurial Intentions	0.097	2.080	0.038	Significant

Source: data processed (2024)

The results of the hypothesis testing in Table 10 show the following explanation: 1.) Entrepreneurship education has a strong positive impact on good feelings, shown by a sample score of 0.634 and a p-value of 0. This means we can agree with the first hypothesis; 2.) Entrepreneurship education

positively influences how people think like entrepreneurs, with a sample score of 0.600 and a p-value of 0. Thus, we can support the second hypothesis; 3.) Positive emotions significantly affect the desire to be an entrepreneur, with a sample score of 0.582 and a p-value of 0. So, the third hypothesis can be accepted; 4.) There is a notable positive effect of thinking like an entrepreneur on the desire to start a business, shown by a sample score of 0.161 and a p-value of 0.034. Therefore, we can accept the fourth hypothesis; 5.) Entrepreneurship education does not have a strong positive effect on the desire to start a business, with a sample score of 0.150 and a p-value of 0.079. This means we cannot accept the fifth hypothesis; 6.) There is a strong positive effect of entrepreneurship education, influenced by good feelings, on the desire to start a business, with a sample score of 0.369 and a p-value of 0. Hence, we can accept the hypothesis about good feelings helping with the connection between entrepreneurship education and wanting to be an entrepreneur; 7.) There is a significant positive effect of entrepreneurship education, influenced by thinking like an entrepreneur, on the desire to start a business, with a sample score of 0.097 and a p-value of 0.038. So, we can accept the hypothesis about thinking like an entrepreneur helping with the link between entrepreneurship education and wanting to be an entrepreneur.

Looking at what the data showed, the results about the first idea we had showed that teaching people about starting businesses really does make them feel more positive. This lines up with work done by (Othman et al., 2020), (Apriliana & Suwarno, 2023), and (Othman et al., 2023). The findings can be explained by the fact that entrepreneurship education influences positive emotions because when students gain sufficient understanding of entrepreneurship, they tend to have a more positive emotional state, especially when starting to build a business. The positive emotions referred to here include students becoming more prepared, confident, and sure of what they need to do when they have the desire to start or are already running a business. The majority of the respondents are young, belonging to Generation Z. One of the personality traits of Generation Z is their tolerance for uncertainty and sense of independence (Parncharoen & Kanjanajuta, 2021). Therefore, Generation Z tends to be more flexible, which makes them emotionally more prepared when provided with entrepreneurship education.

Next, the findings regarding the second hypothesis show a significant positive effect of entrepreneurship education on entrepreneurial orientation. This finding is consistent with research by (Frunzaru & Cismaru, 2018) and (Suwarno et al., 2023). The findings can be explained by the influence of entrepreneurship education on entrepreneurial orientation, as when students gain sufficient understanding of entrepreneurship through the material provided at universities, their entrepreneurial orientation becomes more proactive in decision-making, and they develop a willingness to take risks. Additionally, this education can help students innovate because they understand how to respond to opportunities based on the material they have learned. One aspect of entrepreneurial orientation, which is the proactive attitude of the respondents, is relatively high when they are provided with entrepreneurship education. This can be seen from the respondent profile, where they are young and belong to Generation Z. According to (Frunzaru & Cismaru, 2018), Generation Z has

higher achievement needs and is more open to flexible labor market opportunities.

The third idea to be tested looks at how feeling good affects wanting to start a business. The results can be understood because when students have a positive emotional state, they tend to have sufficient motivation. This motivation then drives them to engage in entrepreneurial activities. Several previous researchers have found similar results to this study, including (Othman et al., 2020), (Apriliana & Suwarno, 2023), and (Othman et al., 2023). The high impact of positive emotions on entrepreneurial intentions is related to the characteristics of the respondents in this study. With the majority of respondents being from Generation Z, the motivation to pursue entrepreneurship is essential for them to face the competitive world (Ingsih et al., 2024).

The fourth idea being tested looks at how a focus on new business impacts desires to start a business. This idea shows that there is a clear, good connection between the two things being measured. The results line up with studies done by (Hassan et al., 2021), (Twum et al., 2021), and (Suwarno et al., 2023). Based on these findings, it can be explained that the influence of entrepreneurial orientation on entrepreneurial intentions occurs because students with a high entrepreneurial orientation have the attitudes and skills needed to face challenges and leverage opportunities in various business activities. The attitudes and skills referred to include proactivity, innovation, and a willingness to take risks. Therefore, entrepreneurial orientation provides a strong foundation for entrepreneurial intentions. Since most of the respondents in this study are from Generation Z, they are more likely to quickly develop a desire to create new businesses when their entrepreneurial orientation is high. (Rinaldi & Herlina, 2022) stated that Gen Z is found to be more willing to take risks compared to Gen Y.

The fifth idea we're checking looks at how learning about starting businesses affects whether people want to start their own business. The results might be because learning about entrepreneurship doesn't automatically make people want to start businesses. These findings are in contrast with most studies by (Suandi & Suwarno, 2022), (Apriliana & Suwarno, 2023) and (Munir et al., 2024) which state that entrepreneurship education can influence individuals to have an entrepreneurial desire. However, the findings from (Hasmidyani et al., 2022), (Mukhtar et al., 2021), and (Duong, 2022) support these results. The explanation for the lack of direct influence may be due to the possible inadequacy of the entrepreneurship education methods provided to students across various study programs, such as Law, Informatics Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, Information Systems, Interior Design, Visual Communication Design, Japanese Literature, English Literature, Chinese Literature, Medicine, Dentistry, and Psychology. For study programs like Management and Accounting, entrepreneurship education methods and various forms of learning are more maturely provided, but this may not be the case for other study programs, which could explain the findings of this hypothesis. A more appropriate method to implement, particularly in study programs outside of business-related fields, might be to increase practical experience, training, workshops, and field studies rather than

theoretical learning. Not only through entrepreneurship education but also through entrepreneurial orientation and positive emotions should entrepreneurship education influence entrepreneurial intentions. Additionally, it could be since most of the respondents have not yet started a business, so internal factors may have a larger influence compared to external factors. Therefore, improvements should come from internal factors such as entrepreneurial orientation and positive emotions, as well as external factors like entrepreneurship education. As explained in the previous paragraph, since the majority of the respondents are from Generation Z, to foster entrepreneurial intentions, positive emotions, or specifically motivation (Ingsih et al., 2024) and a proactive attitude are essential. It is hoped that this will increase motivation and inspire students to choose entrepreneurship as their primary career path. The difference in these findings is interesting and can provide valuable insights for universities, so that classroom learning models can become more creative and engaging.

The following idea checks how learning about starting businesses affects wanting to start one, with good feelings playing a part. This sixth idea suggests that even if learning about starting businesses does not directly make people want to start one, it can increase that desire through students having good feelings. This result matches what other studies have found conducted by (Othman et al., 2020) and (Apriliana & Suwarno, 2023). This can be explained by the fact that entrepreneurship education aims to provide knowledge, skills, and entrepreneurial attitudes. Through the various theories presented in class, students would not have the desire to engage in business if they do not possess the courage to start. Therefore, although understanding has been provided, whether in the form of theory, case studies, practical exercises, or direct interaction with successful entrepreneurs, the role of positive emotions such as courage and motivation remains crucial as a driving force for entrepreneurial intentions in students. According to (Hasmidyani et al., 2022) one way to foster motivation and entrepreneurial intentions for Generation Z, which is the majority of respondents in this study, is by providing entrepreneurship education. In addition to being related to age, the findings can also be linked to gender. The respondents in this study were predominantly female. According to Alexander and Wood in (Sweida & Sherman, 2020), positive emotions in women are generally more intense than in men. Therefore, to increase entrepreneurial intentions in women, entrepreneurship education is needed along with the development of their positive emotions, which are cultivated after receiving entrepreneurship education.

The last hypothesis looks at how learning about entrepreneurship affects a person's desire to start a business, with entrepreneurial orientation playing a middle role. The data shows that while learning about entrepreneurship might not automatically make someone want to launch a company, it can increase that interest if they already have a business-focused mindset. This outcome matches what other research has found from studies done by (Frunzaru & Cismaru, 2018) and (Suwarno et al., 2023). This can be explained by the fact that although students have received education on entrepreneurship, they will not be motivated to start a business if they do not possess entrepreneurial orientation such as risk-taking readiness, proactivity, and innovation as a

foundation. Therefore, entrepreneurial intentions in students will arise not only from entrepreneurship education, but also from the role of entrepreneurial orientation. The high level of entrepreneurial intentions due to the education provided and mediated by entrepreneurial orientation is related to the respondent profile, where the majority are from Generation Z. They have characteristics that emphasize action without waiting for others, seeking new methods that are more productive, preferring to learn or do things directly before asking or thinking, and being proactive. These characteristics may emerge once they have a good understanding of entrepreneurship, although mentorship programs such as role models are not as effective for Gen Z (Rinaldi & Herlina, 2022).

CONCLUSION

This research was done to see how teaching about business creation, having a business-focused mindset, and feeling good feelings help college students want to start their own businesses. The increasing interest of students or young generations in creating job opportunities represents a good opportunity for a country in the coming years. Based on the discussion in the previous section, it can be concluded that to increase entrepreneurial intentions among students, especially when related to Generation Z, it is not enough to only provide entrepreneurship education. It is also necessary to strengthen their entrepreneurial orientation and positive emotions. Therefore, the results of this study conclude that entrepreneurship education does not directly influence entrepreneurial intentions. The explanation for this lack of direct influence may be due to the insufficient methods of entrepreneurship education provided to students. The method that may be appropriate, according to (Lv et al., 2021) is to focus on teaching, business plan competitions, and support for entrepreneurial practices. Regarding the instructors, universities could recruit entrepreneurs to deliver special lectures as mentors for students' entrepreneurial practices. Regarding entrepreneurial practices, universities could facilitate access to resources such as capital, locations, guidance, and training. By doing so, it is expected to enhance students' knowledge, insights, motivation, and inspire them to choose entrepreneurship as their primary career path without feeling worried. The difference in these findings is interesting and can serve as valuable feedback for universities, so that classroom learning models can become more creative and engaging.

Students who understand entrepreneurship are likely to develop more positive emotions when, for example, a good opportunity arises to start a business. With a good understanding and the presence of such opportunities, they become more confident, assured, and ready to start compared to individuals who did not have a prior good understanding. When they are emotionally more positive, it is likely that their intentions to start a business will also be higher. The conclusion from this finding suggests that to foster positive emotions, practical business learning experiences should be provided directly.

Moreover, students who understand entrepreneurship are also likely to develop entrepreneurial orientation. For example, when a good opportunity

arises to start a business, these students will tend to exhibit a more proactive attitude, innovation, and a willingness to take risks when they understand how to run entrepreneurial activities, compared to individuals who lack this understanding. When the level of entrepreneurial orientation among students is high, their interest or entrepreneurial intentions will be greater. Based on these findings, this study suggests that to enhance entrepreneurial orientation, efforts should be made to provide learning experiences that involve activities that are unconventional and more challenging.

There are several limitations in this study. First, the sample used is limited to students from several faculties within a single university. Second, future researchers may consider using other variables as factors that can influence entrepreneurial intentions, such as financial stability, autonomy, or family support. Additionally, for future research, to measure the entrepreneurship education variable, it would be best to administer the study to respondents who receive the same teaching methods.

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