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The Effect of Entrepreneurial Education on Business Performance Through Business Collaboration as a Variable of Meditating International Business Management Students of Ciputra University Surabaya

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Abstract: Reiterating on a research done by the Ministry of Industry, in 2023, Indonesia has maintained an entrepreneurship proportion of just 3.47% inclusive of the entire population, and this is grossly low compared to the 10-14% mark set by developed nations. There are a multitude of reasons which contribute to low amounts of entrepreneurial education, some basic ones are skilled human resources deficiency, lack of the curriculum, etc. Hypothetically, if a correlation exists between excellent entrepreneurs and entrepreneurial education, then the relevance and role of business partnership cannot be overlooked, especially considering the challenges faced for which business partnership acts as a solution. This research was conducted using a quantitative approach in conjunction with purposive sampling as a non probability sampling strategy. An online survey was created to gather data on 181 participants considering the data collection method. In SmartPLS 4.0, Structural Equation Modeling (SEM) is used as a data analysis method in this study. The results indicate that entrepreneurial education has a positive and significant effect on business collaboration and business performance, while business collaboration has a positive and significant impact on business performance. This study indicates that business collaboration mediates the relation between entrepreneurial education and business performance.

Keyword: Entrepreneurial Education, Business Collaboration, Business Performance, University, Business, Networking, Partnership.

INTRODUCTION

Entrepreneurial education is becoming increasingly vital in cultivating a generation of entrepreneurs who are both innovative and adaptable to the shifting dynamics of the global marketplace (Jones & Penaluna, 2020). This form of education is essential for fostering resilient and inventive entrepreneurs. It adopts a multidisciplinary approach that not only emphasizes the transfer of business knowledge but also the development of creative thinking, managerial competencies, and the willingness to embrace risk. Research indicates that nations with robust ecosystems for entrepreneurship education experience higher rates of new business formation

and enhanced competitiveness in the global arena (Rukmana et al., 2023). Entrepreneurship serves as a fundamental pillar for promoting sustainable economic development. Nevertheless, Indonesia's entrepreneurial activity remains relatively low in comparison to other Southeast Asian nations, such as Singapore (8.76%) and Malaysia (4.74%). According to data from the Ministry of Industry, Indonesia's entrepreneurship ratio is projected to reach only 3.47% of the total population in 2023, significantly below the average of developed countries, which ranges from 10% to 14% (Ahdiat, 2023).

Several factors contribute to the low levels of entrepreneurial education, including a prevailing mindset that favors employment over entrepreneurship. Additionally, inadequate entrepreneurial skills among the workforce and insufficient emphasis on entrepreneurship within educational curricula further diminish the younger generation's interest in this field (Pratiwi, 2022). Many graduates opt for employment as employees rather than pursuing entrepreneurial ventures. This trend is largely attributed to the focus of most universities on preparing students for employment rather than equipping them to create jobs (Restiadi, 2020). The advent of the Fourth Industrial Revolution is expected to introduce various new business and industrial models, necessitating human resources that are adequately prepared to innovate and adapt.

Table 1. Overview learning at International Business Management Ciputra University

Semester	Entrepreneurial Course	Overview Learning
1	Entrepreneurship Essential	Mindset in a business and instilling entrepreneurial character
2	Entrepreneurial Venture Creation	Business initiation process through Business Model Canvas and SWOT & PESTEL analysis
3	Entrepreneurial Venture Execution	The process of executing and implementing business. Students will also be taught about Marketing, Finance, Operational, and Technology
4	Entrepreneurial Innovation	The process of designing innovation in business through 10 Types of Innovation
5	Entrepreneurial Innovation For Sustainability	The process of executing innovation and also thinking about business sustainability for the future
6	Business Growth	Ideation design process for further business development

Source: Research data

Business collaboration plays a crucial role in mediating the relationship between entrepreneurship education and business performance. It facilitates the sharing of resources, knowledge, and networks, which can significantly enhance business growth. Strategic partnerships among firms often yield advantages such as improved operational efficiency, innovation in products, and expanded market reach.

Ciputra University employs a project-based learning approach that enables students to engage in networking and collaboration with peers, industry professionals, and the broader business community through a variety of entrepreneurial courses. Students are motivated to

connect and work together with both their fellow Ciputra University colleagues and external professionals. Throughout this process, students frequently engage in collaborative efforts among business teams. Common forms of business collaboration among students include partnerships, bundle pricing, hampers collaboration, profit sharing, booth sharing, consignment, and more. This methodology cultivates essential practical skills such as leadership, communication, and problem-solving, while also preparing students to tackle the challenges present in the business environment. As they progress through various projects, students acquire firsthand experience in generating tangible business outcomes.

The objective of this study is to assess the significant impact of entrepreneurship education at Ciputra University on the business performance of International Business Management students, with business collaboration serving as a mediating variable.

Literature Review

Entrepreneurship Education

Entrepreneurship education is a systematic effort to provide students with knowledge about business opportunities that are still open and growing (Sianturi et al, 2023). Entrepreneurship education is a very important field for advancing and developing society and is a trigger for economic growth, social cohesion, organizational success, and personal fulfillment. Therefore, over the past two decades, entrepreneurship education programs have increased exponentially across all continents.

According to Khakibah et al. (2019) there are four indicators in the Entrepreneurial Education variable, namely (1) Knowledge of starting a business, (2) Improving social skills, leadership, and management skills, (3) Building a team from various expertise, (4) Practicing in real business, (4) Promotion of establishment, (5) Investment network, (6) Information services, (7) Counseling services, (8) Innovation culture, (9) Innovation atmosphere, (10) Entrepreneurial atmosphere.

Business Collaboration

According to Amanda (2023) business collaboration is a process of participation of several people or groups of organizations to work together to achieve certain results in business. According to Marjukah (2021) collaboration or partnership is based on the principle of mutual benefit for the parties. Business collaboration aims to face and/or strengthen the positions of the parties.

According to Mulyana and Sutapa (2016) there are thirteen indicators in the Business Collaboration variable, namely (1) Supplier, (2) Competitor, (3) Buyers, (4) Government, (5) Packaging innovation, (6) Market innovation, (7) Product innovation, (8) Process innovation, (9) Increased ROA, (10) Profit growth, (11) Sales growth, (12) Market share growth, (13) Reduction of customer complaints.

Business Performance

According to Jayachandran (2024), business performance is an indicator of commercial effectiveness, which is the ability of an organization, division, or individual to achieve company goals and anticipated results. Commercial effectiveness relates to costs, timeliness, quality, and revenue or sales, which are useful metrics for evaluating a business. Business performance and its improvement aim to satisfy stakeholders and comply with the concept of business continuity. According to Cahyati et al. (2021) defines business performance as the level of achievement of desired results by the organization, so that organizational goals can vary, and therefore, performance measurements must be adjusted to these goals.

According to Amaliawati, S. (2019) there are four indicators in the Business Performance variable, namely (1) Profit growth, (2) Growth in number of customers, (3) Growth in number of sales, (4) Growth in number of assets.

Hypothesis Development

Entrepreneurial Education on Business Collaboration

The journal of "International collaboration for the advancement of Entrepreneurship Education" (2023) states that local and international collaboration has the potential for further expansion of entrepreneurship education in teacher education, which can then be implemented into the school system. Based on the results of this study, the following hypotheses can be formulated:

H1: It is suspected that Entrepreneurship Education has a significant effect on Business Collaboration

Entrepreneurial Education on Business Performance

This research hypothesis is supported by empirical evidence from the journal of "The Impact of Entrepreneur Education on Business Performance" (2020) stating that university curriculum, relational factors, community factors, and entrepreneurial values were found to have a significant effect on business performance. Based on the results of the study, the following hypotheses can be formulated:

H2: It is suspected that Entrepreneurship Education has a significant effect on Business Performance

Business Collaboration on Business Performance

The journal of "The Impact of Collaboration in the Business Performance Perception: A Study on the Influencing Factors" (2014) states that collaboration affects business performance. Business collaboration can improve project efficiency and preparation for the future. These two aspects are significant in improving business performance. Based on the results of the study, the following hypotheses can be formulated:

H3: It is suspected that Business Collaboration has a significant effect on Business Performance

Mediation Relationship between Entrepreneurship Education and Business Performance with Business Collaboration mediation

Based on research conducted by America (2023) which states that entrepreneurship education can increase business collaboration. In addition, research conducted by Kissimoto (2014) states that the higher the business collaboration carried out by students, the business performance also tends to increase. Based on the results of the study, the following hypothesis can be formulated:

H4: It is suspected that Business Collaboration is able to mediate the relationship between Entrepreneurship Education and Business Performance.

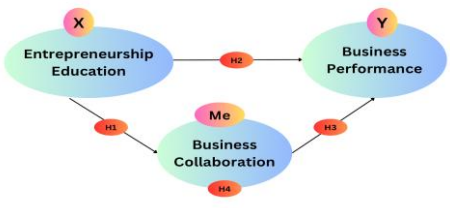

Figure 1. Research Model

METHOD

This study is a quantitative study to test the effect of entrepreneurial education and business collaboration variables on business performance variables and the research data were obtained from structured questions which were then analyzed and involved numerical measurements (Zikmund et al., 2010).

In determining the sampling, the researcher used the purposive sampling method, which means that the sample used was selected from a population that was in accordance with the researcher's wishes and had criteria that must be met (Jailani et al., 2023). In this study, the researcher applied the sample criteria to be used as follows:

1. Active students at Ciputra University
2. Semester 4 or 6
3. Currently taking the Entrepreneurial Innovation / Business Growth course
4. Have done business collaboration

According to Ghozali and Latan (2015), the mediation test is included in the component-based Structural Equation Model (SEM) using Partial Least Square (PLS) for data analysis. The reason researchers use this method is because:

1. The number of variables and paths that must be analyzed,
2. There are formative and reflective indicators,
3. In order to be able to analyze variables directly based on indicators.

According to Ghozali & Latan (2015), there are several tests that must be carried out in structural equation modeling, including:

1. Convergent validity, namely the outer loading or loading factor test for each indicator with a minimum value of 0.70
2. Convergent validity of AVE for each variable with a minimum value of 0.50
3. Discriminant validity of cross loading for each corresponding variable must have the highest value compared to other variables and have a value above 0.70.
4. Cronbach alpha reliability for each variable with a minimum value of 0.70.
5. Composite reliability for each variable with a minimum value of 0.70.
6. R2 test or coefficient of determination to see the magnitude of the influence of the dependent variable
7. The t-statistic test is used for hypothesis testing with a minimum value of 1.96.

RESULTS AND DISCUSSION

Statistical Description

This study successfully obtained 181 respondents with the majority of respondents being 4th semester students (56.4%), food and beverages business (57.5%), 1-2 years old business (33.1%). All respondents were registered as active students of the International Business Management study program at Ciputra University and had done business collaboration . Data were processed and processed using Smart PLS 4.0 software.

Table 2. Descriptive Statistics Table

Items	Question Categories	Total Answers	Percentage (%)
Study program	International Business Management	181	100%
Semester	4	102	56.4%
	6	79	43.6%

Business sector	Food and Beverages	104	57.5%
	Fashion	7	3.9%
	Creative Industry	48	26.5%
	Service	7	3.9%
	Other	15	8.2%
Business Age	Under 6 months	31	17.1%
	6-12 months	49	27.1%
	1-2 years	60	33.1%
	Above 2 years	41	22.7%
Have you ever done business collaboration?	Yes	181	100%

Source: Data Processing (2024)

Data Analysis

Convergent validity testing is tested from each construct indicator. According to Chin (2000), an indicator is said to be valid if its value is greater than 0.70, while a loading factor of 0.50 to 0.60 can be considered sufficient. Based on this criterion, if there is a loading factor below 0.50, it will be dropped from the model.

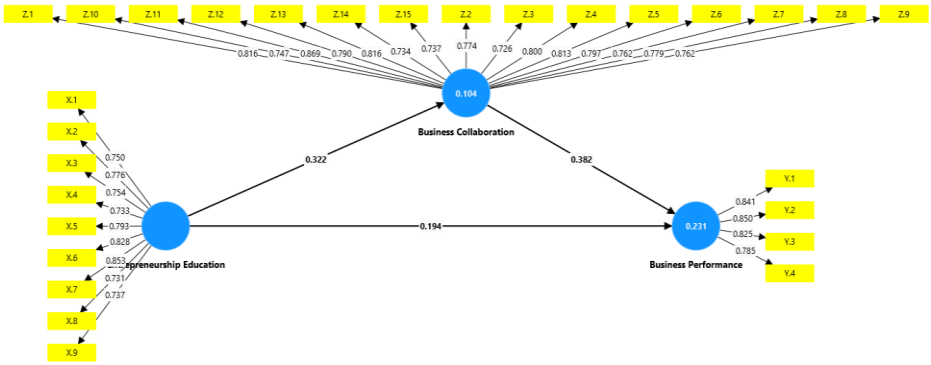

Figure 2. Processing Output with smartPLS 4.0

Based on the table below, it can be seen that all indicators of this research variable are declared valid, because the Outer Loadings value of each indicator is greater than 0.7. Thus, all questionnaire items can be used in further analyses.

Table 3. Convergent Validity Test Results

	Entrepreneurship Education	Business Performance	Business Collaboration
X.1	0.750		
X.2	0.776		
X.3	0.754		

X.4	0.733		
X.5	0.793		
X.6	0.828		
X.7	0.853		
X.8	0.731		
X.9	0.737		
Y.1		0.841	
Y.2		0.850	
Y.3		0.825	
Y.4		0.785	
Z.1			0.816
Z.10			0.747
Z.11			0.869
Z.12			0.790
Z.13			0.816
Z.14			0.734
Z.15			0.737
Z.2			0.774
Z.3			0.726
Z.4			0.800
Z.5			0.813
Z.6			0.797
Z.7			0.762
Z.8			0.779
Z.9			0.762

Source: Processing Output with smartPLS 4.0

Based on the table below, it can be seen that the AVE value has been greater than 0.50, which means that all indicators have met the established criteria and have potential reliability for further testing. Cross loading discriminant validity has also been carried out for each variable and obtained the highest value compared to other variables and has a value above 0.70.

Based on the table below, it can be seen that the results of the Composite Reliability and Cronbach's Alpha tests show satisfactory values, namely all latent variables have been reliable because all latent variable values have Composite Reliability and Cronbach's Alpha values ≥ 0.70. So it can be concluded that the questionnaire used as a research tool has been reliable or consistent.

Table 4. Average Variance Extracted (AVE), Croonbach Alpha and Composite Reliability Test Results

	Average variance extracted (AVE)	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Business Collaboration	0.612	0.957	0.978	0.959
Business Performance	0.682	0.846	0.859	0.895
Entrepreneurship Education	0.599	0.918	0.931	0.931

Source: Processing Output with smartPLS 4.0

The R-Square test results show that the Business Collaboration variable has an R-square value of 0.104. This means that about 10.4% of the variation in Business Collaboration can be explained by exogenous variables in the model while the remaining 89.6% is explained by other variables or independent variables outside the regression equation. This value is relatively low, indicating that the model only has limited predictive ability in explaining changes in Business Collaboration.

For the Business Performance variable , the R-square value of 0.231, indicates that about 23.1% of the variation in business performance can be explained by the variables in the model while the remaining 76.9% is explained by other variables or independent variables outside the regression equation. Although this value is higher than that of Business Collaboration , it is still moderate, so the model has moderate predictive ability in explaining Business Performance.

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Table 5. R-Square Test Results (R 2)

	R-square	R-square adjusted
Business Collaboration	0.104	0.099
Business Performance	0.231	0.223

Source: Processing Output with smartPLS 4.0

Business Collaboration has a positive effect on Business Performance with a t-statistic value of 5.461 because the t-statistic is greater than 1.96. Entrepreneurship Education has a positive effect on Business Collaboration with a t-statistic of 4.351. The effect of Entrepreneurship Education on Business Performance shows a t-statistic value of 2.497.

Table 6. T-Statistic Test Results

	T statistics (|O/STDEV|)
Business Collaboration -> Business Performance	5,461
Entrepreneurship Education -> Business Collaboration	4,351
Entrepreneurship Education -> Business Performance	2,497

Source: Processing Output with smartPLS 4.0

CONCLUSION

Entrepreneurial education variable has a positive effect on business collaboration, as supported by research by America & Neethling (2023). Collaboration has great potential to emerge through entrepreneurial education because it is considered to create a collective activity system that can synergize both parties. The IBM RC program actively encourages students to seek collaboration to promote their business. Ciputra University offers an entrepreneurial ecosystem that allows students to develop business collaboration both internally and externally.

Entrepreneurial education variable has a positive impact on business performance variables. This is in line with research conducted by Mahmood, Zahari, Ibrahim, Jaafar, and

Yaacob (2020). According to Kyari (2020), entrepreneurship education at universities is very important to support entrepreneurial success. Entrepreneurship education helps develop students' entrepreneurial competencies, which ultimately enable them to build and grow their businesses. IBM-RC students have a well-designed entrepreneurship curriculum to encourage students to innovate for their business projects.

Next, the business collaboration variable has a positive effect on business performance. This variable is the same as the research conducted by Kissimoto, Laurindo, and Mattos (2014) that business collaboration is one of the good methods to improve business performance because the method will complement each other with its shortcomings. Student business projects have many shortcomings and imperfections, but from business collaboration both parties can learn from each other and are able to open up more new opportunities so that the collaborating parties can improve their business performance.

Based on the research results, it can be seen that

1. Entrepreneurial education has an impact on business collaboration
2. Entrepreneurial education has an impact on business performance
3. Business collaboration affects business performance
4. Business collaboration partially mediates the relationship between entrepreneurial education and business performance.

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