

THE EFFECT OF PROJECT-BASED LEARNING, SELF-DEVELOPMENT, AND ENTREPRENEURIAL SPIRIT ON STUDENT'S ENTREPRENEURIAL INTERESTS (CASE STUDY ON BIOENTREPRENEURSHIP STUDENTS OF INSTITUT BISNIS DAN INFORMATIKA KESATUAN)

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Abstract

This study aims to find out: 1) the influence of project-based learning on the entrepreneurial interest of students majoring in Bioentrepreneurship at Institut Bisnis dan Informatika Kesatuan (IBIK), 2) the influence of self-development on the entrepreneurial interest of students majoring in Bioentrepreneurship at IBIK, 3) the influence of entrepreneurial spirit on entrepreneurial interest students majoring in Bioentrepreneurship at IBIK, 4) To determine the influence of project-based learning, self-development, and entrepreneurial spirit simultaneously on the entrepreneurial interest of Bioentrepreneurship students at IBIK. This research was conducted using a quantitative method. The population in this study is Bioentrepreneurship Students of IBIK who have taken the Bioentrepreneurship Project course with a sample of 77 respondents. The sampling technique used in this study is a saturated sampling technique. Data collection in this study was carried out by a closed questionnaire which was analyzed by the multiple linear regression analysis method using the SPSS 25 test tool. The results of the research on the Influence of Project-based Learning, Self-Development, and Entrepreneurial Spirit on Student Entrepreneurial Interest (Case Study on Bioentrepreneurship Students of Institut Bisnis dan Informatika Kesatuan) are quite good because all hypotheses are accepted with all independent variables, namely project-based learning, self-development, and entrepreneurial spirit partially and simultaneously have a significant positive effect on entrepreneurial interest.

Keywords: project-based learning, self-development, entrepreneurial spirit, entrepreneurial interest

INTRODUCTION

Indonesia faces a major challenge in achieving the vision of a "Golden Indonesia 2045" by increasing global competitiveness through the development of innovative entrepreneurs. Although the government targets 12 percent of entrepreneurs, by 2023 the number of entrepreneurs had only reached 3.47 percent. The development of innovative entrepreneurial groups is an important part of achieving developed country status. Schumpeter in Bazhal (2016) defines true entrepreneurs as individuals who make new combinations in the business world, which contribute to the nation's economic progress. The increasing interest of young people in entrepreneurship, especially through entrepreneurship majors in universities, is a great potential. One of the innovations in entrepreneurship is bio-entrepreneurship, which combines biological science and business for sustainable products.

As a first step, the author conducted a preliminary survey before starting the research to find problems related to the variables of project-based learning, self-development, entrepreneurial spirit, and entrepreneurial interest. The author made a closed questionnaire in the form of questions and distributed it to 30 respondents. Based on the results of a survey conducted on thirty Bioentrepreneurship students at the Unitary Institute of Business and Informatics, it shows that

following or completing the Biocentrepreneurship Project course which is divided into three semesters is enough to improve their collaboration skills. This shows the positive impact of implementing project-based learning. Most respondents, 76.7 percent, or 23 out of 30 respondents stated that their current motivation was not enough to start their own business.

While entrepreneurial innovation and creativity is an important part of the entrepreneurial spirit and determines interest in doing business, 80 percent of respondents said that their current innovation and creativity is not enough to start their own business. Based on the pre-survey results, 70 percent of respondents answered "No" to the above statement. The remaining 30 percent of respondents answered "Yes." Thus, it can be concluded that respondents are of the opinion that they currently do not have a clear intention to have their own business.

Focusing on project-based learning, self-development, and entrepreneurial spirit, this study aims to explore the relationship between each variable and entrepreneurial interest simultaneously. An in-depth understanding of these relationships will hopefully allow for the creation of effective methods to increase entrepreneurial interest, particularly amongst Biocommerce students of the Unitary Institute of Business and Informatics.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Entrepreneurship is the ability to take advantage of opportunities in a creative and innovative way (Sanawiri & Iqbal, 2018). This shows the importance of innovation in the world of entrepreneurship, where an entrepreneur must create new and different products or services to compete in the market. Creativity is the ability to develop ideas and find new ways to solve problems and take advantage of opportunities. Meanwhile, innovation is the ability to apply creativity to solve problems and find new ways to improve or enrich life (Thian, 2021). Especially in the current industrial era 5.0, the product or service created must attract the market to need it. In other words, an entrepreneur no longer presents something that is needed, but creates something to be needed. Therefore, creativity and continuous innovation are needed. Digital entrepreneurship is a type of entrepreneurship supported by technology, which includes technology companies and other organizations that apply technology comprehensively (Permadi, et al. 2018). In the midst of the onslaught of technology and the ease of information flow today, of course a business cannot escape digitization that can develop the business more broadly.

According to Zulfickar & Sobandi (2020), Creativity, decision-making, leadership, social networking, time management, teamwork, and others are characteristics of entrepreneurship. According to the Ministry of Education and Culture, South Sulawesi Early Childhood and Community Education Development Center (2016), most entrepreneurs share the same characteristics. They have strong and dynamic energy, a strong desire to engage in constant creative adventures, a desire to be personally responsible for the execution of events according to their preferences, and an irresistible desire for achievement. Entrepreneurs also actively prepare themselves to take risks. Undoubtedly, they make this decision after studying various issues related to the business they believe in.

From the description above, the author can conclude that entrepreneurship is the ability to take advantage of opportunities in an innovative and creative way. Being an entrepreneur means that you have to create new and unique goods or services so that you can compete in the market. Creativity is the ability to generate ideas and solve problems; innovation is the use of creativity to enhance or improve life. To stay relevant and thrive and meet market needs and create new needs, businesses in the Industry 5.0 era must continuously demonstrate innovation and creativity.

The research hypothesis is a brief idea about the problem that was found to require deeper validity testing (Sugiyono, 2019). Based on the framework model and theoretical basis above, the hypotheses in this study are as follows:

H1 = It is suspected that there is a significant positive effect of project-based learning (X1) on entrepreneurial interest (Y)

H2 = It is suspected that there is a significant positive effect of self-development variables (X2) on entrepreneurial interest (Y)

H3 = It is suspected that there is a significant positive effect of entrepreneurial spirit variables (X3) on entrepreneurial interest (Y)

H4 = It is suspected that there is a significant positive effect of project-based learning variables (X1), self-development (X2), and entrepreneurial spirit (X3) simultaneously on entrepreneurial interest (Y).

RESEARCH METHODS

This study uses a quantitative method with a closed questionnaire tool which then the data is processed using computational techniques, namely with SPSS 25 media. The object of this research is the relevant variables to be analyzed in this study, namely the independent variable (independent), namely Project-Based Learning code (X1), Self-Development with code (X2), and Entrepreneurial Spirit with code (X3), as well as the dependent variable (dependent), namely Entrepreneurial Interest with code (Y). The subject of this research is the interest of active students of Bioentrepreneurship IBIK who have taken the Bioentrepreneurship Project course.

This research is conducted at the Bogor Kesatuan Institute of Business and Informatics because of its connection with entrepreneurship education at the Faculty of Business in the specialization of Biokewepreneurship, where project-based training, namely the Bioentrepreneurship project is organized. The research will take place from November 2024 to January 2025. The author will use documentation and Google Forms questionnaires to collect data which will be distributed in January 2025.

RESULTS AND DISCUSSION

This study explains the results and discussion based on data and research materials derived from primary data obtained by the author from questionnaires distributed to 77 respondents who have fulfilled the Screening Question.

The multiple linear regression equation formula used in this study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Table 1. Descriptive Statistics for Overall Observations

	Unstandardized Coefficients		Standardized Coefficients		
	B	Error	Beta	t	Sig.
(Constant)	2,435	1,535		1,579	0,119
Project Based Learning	0,308	0,066	0,362	4,659	0,000
Personal Development	0,383	0,070	0,351	5,429	0,000
Entrepreneurial Spirit	0,537	0,097	0,579	5,555	0,000

Data Source: Processed Primary Data

Based on table 1, the results of the multiple linear regression equation test are entered into the formula, it will be as follows:

$$Y = 2.435 + 0.308X_1 + 0.383X_2 + 0.537X_3 + e$$

Based on the regression equation, it can be explained as follows that A positive constant value of 2.435 indicates that interest in entrepreneurship will be worth 2.435 if the project-based learning variable, self-development, and entrepreneurial spirit is worth 0 (zero). The regression coefficient value of the project-based learning variable is 0.308 positive value indicates that when project-based learning increases by 1 (one) unit assuming other variables remain constant, the interest in entrepreneurship will increase by 0.308.

The regression coefficient value of the self-development variable is 0.383 positive value indicates that when self-development increases by 1 (one) unit assuming other variables remain constant, the interest in entrepreneurship will increase by 0.383. The regression coefficient value of the entrepreneurial spirit variable is 0.537 positive value indicates that when the entrepreneurial spirit rises by 1 (one) unit assuming other variables remain constant, the interest in entrepreneurship will increase by 0.537.

Table 2. Determination Coefficient Test

R	R Square	Adj. R Square	Std. Error Of Estimate
0,928	0,862	0,856	0,700

Data Source: Processed Data with SPSS

Based on table 4.18, the results of the coefficient of determination test or R^2 test show the Adj, R Square value of 0.856 or 85.6 percent, so the authors can conclude that the Project-Based Learning variable (X1), Self-Development (X2), and Entrepreneurial Spirit (X3) are able to explain the Entrepreneurial Interest variable (Y) by 85.6 percent, while the remaining 14.4 percent is explained by other variables.

Based on table 3, from the calculation of the F Table, the F Table value is 1.4689. The author can conclude that F count 152.004 > F Table 1.4689 and sig. 0.000 < 0.05, then there is a significant difference so that H_0 is rejected and H_a is accepted. This means that project-based learning variables, self-development, and entrepreneurial spirit simultaneously have a significant positive effect on entrepreneurial interest.

Table 3. Simultaneous F-Test

Indicator	Value	Conclusion
Sig.	0,000	Influence

Data Source: Processed Data with SPSS

Based on table 4 from the t table calculation, the t table value is 1.992. The author can conclude that: The calculated t value of the Project-Based Learning variable (X1) of 4.659 > t Table value of 1.992 and sig. value of 0.000 < 0.05. Then H_0 is rejected and H_a is accepted, meaning that the project-based learning variable has a significant positive effect on interest in entrepreneurship. The t value of the self-development variable (X2) is 5.429 > t table value of 1.992 and sig value. which is 0.000 < 0.05. Then H_0 is rejected and H_a accepted entrepreneurship, meaning that self-development variables have a significant positive effect on interest in entrepreneurship. The calculated t value of the Entrepreneurial Spirit variable (X3) of 6.293 > t table value of 1.992 and sig. value of 0.000 < 0.05. Then H_0 is rejected and H_a is accepted, meaning that the entrepreneurial spirit variable has a significant positive effect on interest in entrepreneurship.

Table 8. Partial t test

Variabel	coefisien	Sig.	Relationship	Conclusion
(Constanta)	2,435	0,119		

Project Based Learning	0,308	0,000	Positif Significant	Accepted
Personal Development	0,383	0,000	Positif Significant	Accepted
Entrepreneurial Spirit	0,537	0,000	Positif Significant	Accepted

Data Source: Processed Data with SPSS

Based on the results of statistical research conducted with multiple linear regression analysis through SPSS, the following are the findings of the research results: The results of research conducted by the author show that the Project-Based Learning variable obtained a t value of 4.659 with a significance value of 0.000 ($0.000 < 0.005$) and a positive regression coefficient of 0.308, which means that project-based learning has a significant positive effect on student entrepreneurial interest.

The results of the questionnaire distributed with 5 statement items for the project-based learning variable showed that most respondents agreed, this study successfully proved the first hypothesis which states that there is a significant positive effect of project-based learning variables on entrepreneurial interest so that the first hypothesis in this study is accepted. The results of this study are relevant to previous research conducted by Nugrahani, et al. (2023) with the title "Measurement of Student Entrepreneurial Motivation Through Project-Based Business Learning" with research results showing that project-based learning significantly increases student interest in entrepreneurship. Project-based learning also improves knowledge, attitudes, skills, and supports their entrepreneurial abilities.

The results of research that has been done by the author shows that the Self-Development variable obtained a t value of 5.429 with a significance value of 0.000 ($0.000 < 0.05$) and a positive regression coefficient of 0.383 means that self-development has a significant positive effect on student entrepreneurial interest. The results of the questionnaire distributed with 4 statement items for the self-development variable showed that most respondents agreed, so this study successfully proved the second hypothesis which states that there is a significant positive effect of self-development variables on entrepreneurial interest so that the second hypothesis in this study is accepted.

The results of this study are relevant to previous research conducted by Farashah (2015) with the title "The effects of demographic, cognitive, and institutional factors on the development of entrepreneurial intention: Toward a socio-cognitive model of entrepreneurial career" with the results showing that entrepreneurial intentions are influenced by self-efficacy and outcome expectations that match personal interests by providing access to inspiration, innovative experiences, and positive attitudes towards entrepreneurship.

The results of the research conducted by the authors show that the Entrepreneurial Spirit variable obtained a t value of 5.555 with a significance value of 0.000 ($0.000 < 0.05$) and a positive regression coefficient of 0.537, meaning that the entrepreneurial spirit has a significant positive effect on student entrepreneurial interest. The results of the questionnaire distributed with 4 statement items for the self-development variable showed that most respondents agreed, so this study successfully proved the third hypothesis which states that there is a significant positive effect of self-development variables on entrepreneurial interest so that the second hypothesis in this study is accepted.

The results of this study are relevant to previous research conducted by Saputra, et al. (2022) with the title "The Effect of Entrepreneurial Spirit on Motivation and Entrepreneurial Interest (Literature Review)" with the results of research showing that the entrepreneurial spirit that a person has will affect a person's entrepreneurial interest because they will always want to open their own business or business in accordance with the ideas and ideas they have. They will be eager to continue their business or create a new business even if they find failure in running it.

The results of research conducted by the author show that the Entrepreneurial Spirit variable obtained an F value of 152.004 with a significance value of 0.000 ($0.000 < 0.05$) and a positive regression coefficient of 2.435 which indicates a positive direction of relationship between the independent variable and the dependent variable, meaning that if project-based learning, self-development, and entrepreneurial spirit increase, then student entrepreneurial interest also increases.

Basically, there are many factors that can influence students' entrepreneurial interest, but specifically for Bioentrepreneurship students at the Unitary Institute of Business and Informatics, there are many courses that shape student interest, for example the Bioentrepreneurship Project course. In addition to implementing the theory that has been learned, the Bioentrepreneurship Project course also facilitates student exploration activities in terms of process and progress where during the process of preparing business models, research and development, as well as production, promotion, and sales, students are familiar with how to adapt, learn independently, communication, evaluation, and much more. In addition, in the process, it is not uncommon for students to find obstacles or even have to start from scratch. This is related to the variables of self-development and entrepreneurial spirit where students must persevere and have the resilience to keep trying, in addition to the need for innovation and creativity to continue to generate new ideas.

The results of the questionnaire distributed with 4 statement items for the entrepreneurial interest variable show that most respondents agree as well as with the results of the simultaneous significance test or F test which is very significant and the coefficient of determination test or R^2 test which shows that project-based learning, self-development, and entrepreneurial spirit are able to explain changes in entrepreneurial interest positively, so this study successfully proved the fourth hypothesis which states that there is a significant positive effect of project-based learning variables, self-development, and entrepreneurial spirit simultaneously have a significant positive effect on student entrepreneurial interest.

The results of this study are relevant to previous research conducted by Dorahman & Sa'odah (2019) with the title "The Effect of Self-Efficacy and Entrepreneurship Education on Student Entrepreneurial Interest in the Faculty of Teacher Training and Education at Muhamadiyah University Tangerang" with research results showing that when variable testing is carried out simultaneously or simultaneously, entrepreneurship education and self-efficacy can be an important component for entrepreneurial interest.

CONCLUSION

Based on the results of research and data analysis conducted to determine "The Effect of Project-Based Learning, Self-Development, and Entrepreneurial Spirit on Student Entrepreneurial Interest (Case Study on Bioentrepreneurship Students of the Unitary Institute of Business and Informatics), the following conclusions are obtained: Project-Based Learning has a significant positive effect on Student Entrepreneurial Interest. Self-Development has a significant positive effect on Student Entrepreneurial Interest. Entrepreneurial Spirit has a significant positive effect on Student Entrepreneurial Interest. Project-Based Learning, Self-Development, and Entrepreneurial Spirit simultaneously have a significant positive effect on Student Entrepreneurial Interest.

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