Indonesian Journal of Learning Education and Counseling
Website: https://journal.ilininstitute.com/index.php/IJoLEC
Vol 8, No 1, 2025, pp 36-46
p-ISSN:2622-8068 and e-ISSN: 2622-8076

The Entrepreneurship, Socioeconomic Factors, and Motivation in Project-Based Learning Success: The Mediating Role of Self-Efficacy

Romauli Nainggolan [1*], Yuli Kartika Dewi [2]
[1] Management, Universitas Ciputra Surabaya, Indonesia
Email: romauli.nainggolan@ciputra.ac.id
[2] Management, Universitas Ciputra Surabaya, Indonesia
Email: yuli.kartika@ciputra.ac.id

Article info

Article history:
Received: 25-06-2025
Revised: 11-07-2025
Accepted: 26-08-2025
Publish: 12-09-2025

DOI:
doi.org/10.31960/ijolec.V8i1.3053

Abstract. Project-based learning (PjBL) has become one of the most widely adopted learning methods in higher education, particularly in business-related courses. However, limited research has examined how factors such as entrepreneurship, socio-economic background, and student learning motivation influence the success of PjBL, especially when mediated by self-efficacy. This study aims to fill that gap by analyzing these variables in the context of an International Business course. This quantitative research involved 270 management students engaged in PjBL, with data collected through questionnaires and analyzed using Structural Equation Modelling–Partial Least Squares (SEM-PLS), chosen for its suitability in testing complex mediation models. The findings reveal several insights. First, learning motivation has a positive effect on self-efficacy. Second, self-efficacy significantly contributes to project-based learning success. Third, learning motivation positively affects project-based learning success through the mediation of self-efficacy. In contrast, entrepreneurship and socio-economic factors were found to have no significant effect on self-efficacy or project-based learning success. These findings suggest that while motivation is a key driver of PjBL success, entrepreneurship and socio-economic factors may not play as strong a role as expected in this context. Practically, this highlights the importance for lecturers to design motivational support strategies and for institutions to reconsider how entrepreneurship and socio-economic factors are integrated into PjBL to enhance learning outcomes.

Keywords:
socio economic; entrepreneurship; self efficacy; learning motivation; project-based learning.

Coresponden author:
Romauli Nainggolan
Addres: CitraLand CBD Boulevard, Made, Kec. Sambikerep, Surabaya, Jawa Timur, Indonesia
Email: romauli.nainggolan@ciputra.ac.id

INTRODUCTION

Project-based learning (PjBL) has become an important topic in both secondary and higher education. Many studies show that PjBL is more effective because it encourages students to be more active, creative, and collaborative in the classroom (Taliak et al., 2024; Ashra & Surhayadi, 2021). In Indonesia, there is growing interest in integrating PjBL into the curriculum, yet its implementation still faces challenges, particularly in ensuring the active participation of students from diverse study program backgrounds. This highlights the need for further investigation into the factors that influence the success of PjBL.

Previous studies have demonstrated that entrepreneurship curricula and learning motivation contribute positively to student performance in PjBL. For example, in design and architecture programs, entrepreneurship-based curricula foster student creativity, strengthen self-efficacy, and improve learning outcomes by encouraging students to produce and commercialize their projects (Marniati & Witcjaksono, 2020; Okudan et al., 2006; Pinto & Reshma, 2021). Entrepreneurial education also shapes students' readiness and mindset for starting a business, thereby reinforcing motivation and self-efficacy (Kılıçoğlu, 2018; Wardana et al., 2020). However, other research shows that entrepreneurship curricula are not always successful in fostering entrepreneurial values (Rahmawati et al., 2023). This inconsistency suggests that the relationship between entrepreneurship, motivation, and PjBL outcomes remains unclear.

Apart from entrepreneurship, socio-economic factors also play a critical role in shaping student engagement in PjBL. Access to technology, learning materials, and parental support often depend on socio-economic conditions, which can directly affect students' participation and academic performance (Owoseni, 2020; Werang et al., 2024). Socio-economic background is therefore not only a determinant of student achievement but also a potential source of inequality in higher education (Ernstmeyer & Christman, 2023). Addressing these disparities is essential for creating inclusive PjBL practices.

At the same time, self-efficacy has been identified as a key mediator linking motivation, socio-economic background, and learning outcomes. Students with high self-efficacy feel more capable of overcoming challenges and are more likely to succeed, even in less supportive socio-economic contexts (Sari et al., 2021). Previous research has also shown that self-efficacy mediates the relationship between motivation, engagement, and academic achievement (Portento et al., 2022; Alhamad et al., 2024). Thus, strengthening self-efficacy may help reduce the negative impact of socio-economic barriers while amplifying the benefits of learning motivation (Amanda et al., 2023).

Despite the growing literature, studies that simultaneously examine entrepreneurship, socio-economic factors, learning motivation, and self-efficacy in the context of PjBL remain limited, particularly in management education. This study addresses this gap by investigating these relationships among management students at Ciputra University, Surabaya, a campus with a strong entrepreneurial orientation and diverse socio-economic student backgrounds. Understanding how these variables interact in this local context provides both theoretical contributions and practical implications for designing more effective PjBL strategies.

Based on the above discussion, the following hypotheses are proposed:

H1: Socio-economic factors influence self-efficacy.

H2: Entrepreneurship influences self-efficacy.

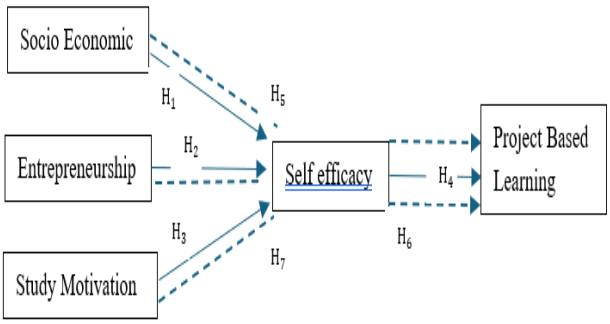
H3: Learning motivation influences self-efficacy.

H4: Self-efficacy influences project-based learning success.

H5: Socio-economic factors influence project-based learning success through the mediation of self-efficacy.

H6: Entrepreneurship influences project-based learning success through the mediation of self-efficacy.

H7: Learning motivation influences project-based learning success through the mediation of self-efficacy.



METHOD

This research adopts a quantitative, explanatory research design to test causal relationships between socioeconomic factors, entrepreneurship, student learning motivation, and project-based learning success, with self-efficacy as a mediating variable. The explanatory design is chosen because the study aims not only to describe but also to explain how independent variables influence dependent variables through direct and indirect paths.

The research was conducted during the even semester of the 2022/2023 academic year (February–June 2023) at Ciputra University, Surabaya, which was selected because the university consistently applies project-based learning (PjBL) across its curriculum. This makes it a relevant and strategic context for analyzing the success factors of PjBL implementation in International Business courses.

The population consists of undergraduate students in the Management Study Program at Ciputra University who are enrolled in courses using the PjBL method.

Sampling was conducted using a purposive sampling technique with the following criteria: (a) Inclusion criteria: students actively enrolled in PjBL-based courses during the study period, minimum 2nd year of study, and having completed at least one major PjBL project; (b) Exclusion criteria: students who did not complete the questionnaire or provided incomplete responses.

A total of 268 valid responses were obtained. The sample size meets the adequacy requirements for SEM-PLS analysis, following the 10-times rule (Hair et al., 2019), which requires at least 10 times the maximum number of structural paths directed at a construct. Since the most complex construct in this model has fewer than 20 indicators, the minimum required sample size is 200, meaning the 268 respondents are sufficient.

Data were collected through a structured questionnaire using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The instrument was adapted from established studies and tailored to the PjBL context. There are five variables in this research, Entrepreneurship (Okudan et al., 2006), Socioeconomic factors (Sari et al., 2021). Learning motivation (Amanda et al., 2023). Self-efficacy (Wardana et al., 2020). Project-based learning success ((Bilgin et al., 2015).)

Instrument validity and reliability were tested before hypothesis testing: (1) Content validity was confirmed through expert judgment by two lecturers specializing in management and education; (2) Construct validity and reliability were assessed using Confirmatory Factor Analysis (CFA), with criteria of factor loading > 0.7, AVE > 0.5, and Composite Reliability > 0.7.

Table 1. Operational Definitions of Variables

Variable	Indicators	Definition	Items	References
Entre preneurship	1.Curriculum 2. Quality of educators 3.Teaching and learning facilities	**Entrepreneurship** is the process by which an individual creates added value and wealth through identifying investment opportunities, organizing enterprises, and demonstrating	4 items	Okudan et al., 2006

		courage in taking risks and facing economic uncertainty, which in turn contributes to economic growth.		
Socioeconomic Factors	1.Measure of wealth 2.Measure of power 3.Measure of honor 4.Measure of knowledge	**Socio-Economic** is a social and economic condition that relates to the position of an individual's or family's income in society, as well as efforts to create goods and services to meet both physical and spiritual needs.	4 items	(Sari et al., 2021).
Learning Motivation	1.Duration of activities (level of time utilization in learning) – items 1–2 2.Frequency of activities (how often learning is carried out within a certain period) – items 3–4 3.Consistency and persistence in learning objectives – items 5–6 4.Perseverance, resilience, and ability to face obstacles and difficulties – items 7–8 5.Devotion and sacrifice to achieve learning goals – items 9–10 6.Level of aspiration (intentions, plans, goals, targets to be achieved in learning) – items 11–12 7.Level of qualification of achievements or learning outcomes – items 13–14	**Learning motivation** is the drive that arises both from within and outside the student, which is capable of generating enthusiasm and eagerness to learn, as well as providing direction to learning activities so that the intended goals can be achieved.	5 items	(Amanda et al., 2023).
Self-Efficacy	1.Level of difficulty 2.Generalization 3.Strength	**Self-Efficacy** is an individual's belief that they are capable of influencing their environment based on their own abilities and self-management.	3 items	(Wardana et al., 2020)
PjBL Success	1.Task completion is carried out independently, starting from the planning stage, preparation, up to the presentation of the	**Project-Based Learning** is a project-oriented learning approach that serves as	4 items	(Bilgin et al., 2015)

	product. 2.Learners take full responsibility for the project to be produced. 3.The project involves the roles of peers, teachers, parents, and even the community. 4.Trains creative thinking skills. 5.The classroom situation is highly tolerant of shortcomings and development.	one of the student-centered learning models.

Data analysis was conducted using Structural Equation Modeling – Partial Least Squares (SEM-PLS) with SmartPLS 4.0 software (Ringle et al., 2022). SEM-PLS was chosen because: (1) It is suitable for testing complex models with multiple mediation relationships;(2) It is robust for non-normal data distribution; (3) It works well with moderate sample sizes (200–300). The analysis procedure followed Hair et al. (2021): (a) Outer model evaluation – to assess measurement reliability and validity (Cronbach's alpha, Composite Reliability, AVE, discriminant validity); (b) Inner model evaluation – to test structural relationships (R^2, path coefficients, f^2 effect sizes); (c) Mediation nmmn cx testing – using bootstrapping with 5,000 resamples to assess the indirect effects of self-efficacy.

The overview of the research respondents based on gender and age is explained in table 1 below. There were 149 male students and 97 female students. Based on the table, the respondents were mostly male. Respondents aged 18 years were the most.

Table 2. Respondents overview by age

Age	Totals
17	2
18	81
19	132
20	16
21	2
22	7
23	2

RESULT AND DISCUSSION

The analysis technique used in this study is Partial Least Square (PLS) using the Smart PLS platform. This analysis technique measures two parts, namely the evaluation of the research instrument (outer model) and the

Outer Model

Evaluation of the model structure (Inner model). The outer model measures the research instrument with 3 criteria, namely convergent validity, discriminant validity and composite reliability (Hair et al., 2012). Convergent validity measures the extent to which the indicators reflect the construct with a loading factor value ≥ 0.70 and Average Variance Extracted (AVE) with an ideal value: ≥ 0.50.

Based on Table 3. it shows that the results of the convergent validity test show that the outer loadings value for items from socio-economic, entrepreneurship, study motivation, self-efficacy and project-based learning is greater than 0.7 so that it is declared convergently valid.

Table 3. Convergent Validity

Indicator	Outer Loading	Description
Socio Economic (X1)		
X1.4	0,860	Valid
X1.5	0,836	Valid
X1.6	0,786	Valid
X1.7	0,765	Valid
Entrepreneurship (X2)		
X2.1	0,728	Valid
X2.2	0,886	Valid
X2.3	0,870	Valid
X2.4	0,875	Valid
X2.5	0,910	Valid
X2.6	0,881	Valid
Study Motivation (X3)		
X3.1	0,752	Valid
X3.2	0,756	Valid
X3.5	0,743	Valid
X3.6	0,791	Valid
X3.7	0,732	Valid
X3.8	0,786	Valid
X3.9	0,804	Valid
X3.10	0,738	Valid
X3.12	0,810	Valid
X3.13	0,784	Valid
Self-Efficacy (Z)		
Z.1	0,858	Valid
Z.2	0,911	Valid
Z.3	0,753	Valid
Z.4	0,885	Valid
Project Based Learning (Y)		
Y.1		
Y.2	0,721	Valid
Y.3	0,780	Valid
Y.4	0,708	Valid
Y.6	0,709	Valid
Y.7	0,836	Valid
Y.8	0,710	Valid
	0,781	Valid

Source: SmartPLS, 2024

Table 4. Discriminant Validity

Variabel		X2 Entrepreneurship	Y Project Based Learning	Z Self Efficacy	X1 Socio Economic	X3 Study Motivation
X2	Entrepreneurship	0,860				
Y	Project Based Learning	0,551	0,751			
Z	Self Efficacy	0,363	0,661	0,854		
X1	Socio Economic	0,098	0,168	0,139	0,813	
X3	Study Motivation	0,469	0,729	0,551	0,182	0,770

Source: SmartPLS, 2024

Table 4 shows that the results of the discriminant validity test show a diagonal value greater than 0.7 and also greater than the value other than the diagonal. This indicates that the variables of socio-economic, entrepreneurship, study motivation, self-efficacy and project-based learning have been discriminated validly

Table 5. Heterotrait-monotrait ratio (HTMT)

Variabel		X2 Entrepreneurship	Y Project Based Learning	Z Self Efficacy	X1 Socio Economic	X3 Study Motivation
X2	Entrepreneurship					
Y	Project Based Learning	0,606				
Z	Self Efficacy	0,389	0,734			
X1	Socio Economic	0,112	0,201	0,158		
X3	Study Motivation	0,499	0,808	0,598	0,203	

Table 5 shows that the results of the Heterotrait-monotrait ratio (HTMT) show a diagonal value under than 0.85 and also under than the value other than the diagonal. This indicates that the variables of socio-economic, entrepreneurship, study motivation, self-efficacy and project-based learning have been discriminated validly and there is no overlap.

Table 6. Construct Reliability

Variable		Cronbach's Alpha	Rho_A	Composite Reliability	AVE
X2	Entrepreneurship	0.929	0.929	0.944	0.740
Y	Project Based Learning	0.871	0.882	0.900	0.564
Z	Self Efficacy	0.875	0.896	0.914	0.729
X1	Socio Economic	0.831	0.866	0.886	0.660
X3	Study Motivation	0.924	0.925	0.936	0.593

Source: SmartPLS, 2024

Table 6 shows that the results of the reliability test of the research variables show that the Cronbach alpha and composite reliability values of each variable are greater than 0.6, thus the variables gender, socio-economic, entrepreneurship, study motivation, self-efficacy and project-based learning are declared reliable.

Inner model

Measures the model structure with partial least square is used to answer the previously designed hypothesis. In this section, 7 hypotheses will be tested.

Based on Table 3.7. the results of the study show that learning motivation has a significant effect on self-efficacy, as indicated by the t-statistics value of 6.739 greater than 1.96 and the p-value of 0.000 less than 0.05 (Hair et al., 2019). Furthermore, it was found that self-efficacy had a significant effect on project-based learning, as indicated by the t-statistics value of 10.056 greater than 1.96 and the p-value of 0.000 less than 0.05. Finally, it was found that study motivation had a significant effect on project-based learning through Self-Efficacy, as indicated by the t-statistics value of 4.567 greater than 1.96 and the p-value of 0.000 less than 0.05.

Table 7. Hypothesis Testing Result

Hipotesis	***T Statistics***	***P-values***	***Results***
H1. Socio Economic > Self Efficacy	0,678	0,466	Not supported
H2. Entrepreneurship > Self Efficacy	0,890	0,373	Not supported
H3. Study Motivation > Self Efficacy	6,739	0,000	Supported
H4. Self Efficacy > Project Based Learning	10,056	0,000	Supported
H5. Socio Economic > Self Efficacy > Project Based Learning	0,666	0,505	Not supported
H6. Entrepreneurship > Self Efficacy > Project Based Learning	0,858	0,391	Not supported
H7. Study Motivation > Self Efficacy > Project Based Learning	4,567	0,000	Supported

Source: SmartPLS, 2024

Table 8. Coefficients of determination (R^2)

Variable	**R-square**
Project Based Learning (Y)	0,437
Self Efficacy (Z)	0,326

Based on Table 3.8. The results of the study show that project-based learning (Y) interpretation of the model's strength is moderate (Hair & Marko, 2019). This means that 43.7% of the variation in Project-Based Learning can be explained by Socio Economic (X1), Entrepreneurship (X2), Study Motivation (X3) and Self-Efficacy (Z). The remaining 56.3% of the variation is explained by factors outside the model. R-square of self efficacy (Z) show is 0,326, this means that 32.6% of the variation in self-efficacy is explained by the independent variables in the model. The remaining 67.4% of the variation is influenced by other factors not examined.

Discussion

The role of learning motivation on self-Efficacy

The results of this study revealed that learning motivation has a significant effect on students' self-efficacy as shown in the path coefficient. This means that the higher the students' learning motivation, the higher their self-confidence in being able to complete tasks or challenges in an academic context, especially in a project-based learning approach. This is in line with the Self-Determination Theory (SDT) developed by Deci & Ryan (1985). This theory states that intrinsic motivation has a major impact on shaping an individual's self-confidence in their abilities (Alhamad et al., 2024). In line with Bandura (1997), motivation and self-efficacy have a reciprocal relationship: motivated individuals tend to develop the belief that they are capable of succeeding in their tasks (Bandura, 1978). These results are supported by other studies that reveal that self-efficacy and motivation interact to influence students' academic achievement (Alhamad et al., 2024). The relationship between motivation and self-efficacy is very important in influencing a person's performance at work (Fajri & Wijaya, 2024). Having a desire to succeed, having hopes and ideals for the future, and appreciation for learning from the Ciputra University campus environment will play a strong role in students' ability to overcome difficulties or challenges in learning.

The role of self-efficacy in Project-Based Learning

Self-efficacy has been shown to have a very significant influence on involvement in PBL. This shows that students who are confident in their abilities (high self-efficacy) tend to be more active, confident, and persistent in completing learning projects carried out in collaboration with others. According to Bandura (1997), self-efficacy plays a role in determining how much effort a

person makes, how long they persist in the face of difficulties, and how resilient they are in facing challenges. In the context of project-based learning, this is very crucial because this approach requires independence, problem solving, and collaboration with a team (Bandura, 1978). On the contrary, the project-based learning model has an effect on self-efficacy in students of class SMA Negeri 1 in Aceh (Anjli et al., 2023). Student self-efficacy has a positive relationship with the success of using the Project-Based learning method in the education study program at the University in Turkey (Bilgin et al., 2015). Therefore, the results of this study reveal that students in the management study program have the strength and ability to solve problems in the project-based learning process.

The role of learning motivation on project-based learning mediated by self-Efficacy

The results of this study indicate that students' learning motivation has a significant indirect effect on their involvement in project-based learning (PBL) through the enhancement of self-efficacy. This suggests that learning motivation not only directly influences students' enthusiasm for learning, but also indirectly improves learning effectiveness by strengthening their self-confidence. These findings support the argument by Zimmerman (2000), which posits that motivation serves as the foundation of self-regulated learning, while self-efficacy acts as an internal mechanism that bridges motivation and learning outcomes. Therefore, self-efficacy functions as a mediator between motivation, engagement, and academic performance (Portento et al., 2022). This has important implications for higher education policymakers to foster student motivation during the teaching and learning process.

Acknowledgements

We would like to thank the TLiC institution for funding this research since October 2024. TLiC is a center for innovation in learning and teaching management at Ciputra University Surabaya.

CONCLUSION AND SUGGESTIONS

This study concludes that learning motivation plays a significant role in shaping students' self-efficacy, which in turn enhances the success of project-based learning (PBL) among Management students at Universitas Ciputra Surabaya. The findings demonstrate that motivation not only has a direct positive effect on self-efficacy but also indirectly contributes to the success of PBL through the mediation of self-efficacy. This highlights the importance of lecturers in fostering and sustaining student motivation, as motivational support is proven to strengthen students' confidence in completing tasks independently and achieving project outcomes. The novelty of this study lies in the identification of self-efficacy as a mediating factor that links learning motivation to PBL success, providing deeper insight into how psychological aspects influence learning outcomes. Therefore, it is recommended that lecturers and institutions design PBL activities that incorporate motivational strategies, ensuring that students are continuously supported both inside and outside the classroom to maximize the effectiveness of project-based learning.

REFERENCE

Alhamad, A., Baadhem, A. M. S., & Hameed, A. A. (2024). Psychological Interventions to Enhance Self-Efficacy and Motivation in Libyan Students. In *Advanced Journal of STEM Education* (Vol. 2, Issue 1, pp. 15–30). https://doi.org/10.31098/ajosed.v2i1.2013

Amanda, N. G., Tanjung Biru, L., & Suryani, D. I. (2023). Pengaruh Model Pembelajaran Project Based Learningterhadap Keterampilan Proses Sains.pdf. *Journal of Science Education*, *7*(2), 168–177. https://doi.org/https://doi.org/10.33369/pendipa.7.2.168-177

Anjli, D., Muliani, M., Widya, W., Zahara, S. R., Andriani, R., Novita, N., & Idris, S. (2023). the Effect of the Project-Based Learning Model on Students' Science Literacy Skills and Self-Efficacy. *Jurnal Eduscience*, *10*(3), 794–808. https://doi.org/10.36987/jes.v10i3.5

245

Ashra, W. N., & Surhayadi, A. (2021). Studi Komperatif Pelaksanaan Pembelajaran Berbasis Projek pada Sekolah Menengah di Kota Mataram dan Lombok Barat. *Jurnal Ilmiah Profesi Pendidikan*, *6*(4), 705–710. https://doi.org/10.29303/jipp.v6i4.343

Awwaliyah, I. N., Sumani, S., Singgih, M., & Widodo, R. (2023). How Does Digital Financial Literacy Relate To Financial Performance of Msmes Tourism Firm? the Mediating Role of Financial Behavior. *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, *12*(1), 128–147. https://doi.org/10.26418/jebik.v12i1.60356

Bandura, A. (1978). Self-efficacy: Toward a unifying theory of behavioral change. *Advances in Behaviour Research and Therapy*, *1*(4), 139–161. https://doi.org/10.1016/0146-6402(78)90002-4

Bilgin, I., Karakuyu, Y., & Ay, Y. (2015). The effects of project based learning on undergraduate students' achievement and self-efficacy beliefs towards science teaching. *Eurasia Journal of Mathematics, Science and Technology Education*, *11*(3), 469–477. https://doi.org/10.12973/eurasia.2014.1015a

Ernstmeyer, K. E., & Christman, E. I. (2023). Adopting Open Educational Resources as an Equity Strategy. *Nursing Education Perspectives*, *44*(5), 306–307. https://doi.org/10.1097/01.NEP.0000000000001170

Fajri, M. A., & Wijaya, F. (2024). Pengaruh Motivasi dan Self EfficacyMelalui KepuasanKerja.pdf. *Eco-Bus*, *6*(3).

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, *40*(3), 414–433. https://doi.org/10.1007/s11747-011-0261-6

Kılıçoğlu, G. (2018). Study on the relationship between social studies course self-efficacy and motivation levels of secondary school students. *Universal Journal of Educational Research*, *6*(8), 1743–1748. https://doi.org/10.13189/ujer.2018.060816

Marniati, & Witcjaksono, A. D. (2020). Curriculum implementation, entrepreneurship motivation, and fashion entrepreneurship - case study of student learning outcomes in regular classes and entrepreneurship classes. *International Journal of Fashion Design, Technology and Education*, *13*(3), 317–324. https://doi.org/10.1080/17543266.2020.1799078

Mashudi. (2021). Inovasi Pembelajaran Aktif di Perguruan Tinggi.pdf. *Southeast Asian Journal of Islamic Education*, *4*(1).

Mayuristastia, S., HARDIANSYAH, H., & IQBAL, M. (2024). Pengaruh Manajemen Pembelajaran Berbasis Proyek Terhadap Kreativitas Belajar Peserta Didik Di Smkn 1 Keruak. In *SCIENCE : Jurnal Inovasi Pendidikan Matematika dan IPA* (Vol. 4, Issue 3, pp. 267–280). https://doi.org/10.51878/science.v4i3.3242

Okudan, G., Finelli, J., & Kisenwether, E. (2006). Entrepreneurial design projects: What type of projects are effective in improving student learning & enthusiasm? *ASEE Annual Conference and Exposition, Conference Proceedings*. https://doi.org/10.18260/1-2--1221

Owoseni, A. (2020). SOCIO ECONOMIC.pdf. *International Journal of Emerging Technologies in Learning*, *15*(19213). https://doi.org/https://doi.org/10.3991/ijet.v15i19.14649

Pinto, A. P., & Reshma, K. J. (2021). Impact of project-based learning on

entrepreneurial and social skills development. *Journal of Engineering Education Transformations*, *34*(Special Issue), 593–598. https://doi.org/10.16920/jeet/2021/v34i0/157227

Portento, K. M. B., Borboran, A. M. T., & Paredes, E. A. (2022). Self-Efficacy as a Mediator between Motivation and Engagement and Academic Performance. In *Journal of Mathematics and Statistics Studies* (Vol. 3, Issue 2, pp. 37–41). https://doi.org/10.32996/jmss.2022.3.2.4

Rahmawati, F. N., Subiyantoro, S., & Hayati, B. N. (2023). Efektifkah Kurikulum Dan Materi Berbasis Enterpreneurship Di Perguruan Tinggi Indonesia Saat Ini? *Judika (Jurnal Pendidikan Unsika)*, *11*(1), 1–14. https://doi.org/10.35706/judika.v11i1.8487

Rismayanti, R., Rayhan, M. A., Adzim, Q. K. El, & Fatihah, L. A. (2023). Pengaruh Motivasi Instrinsik dan Motivasi Ekstrinsik Terhadap Proses Pembelajaran Mahasiswa Universitas Pendidikan Indonesia. *Jurnal Pendidikan, Sains Dan Teknologi*, *2*(2), 251–261. https://doi.org/10.47233/jpst.v2i2.742

Sari, H. P., Hasan, R., & Irwandi. (2021). Pengaruh Model Pembelajaranproject Based Learningterhadap Kemampuan Berpikir Kreatif Dan Hasil Belajar.pdf. *Jurnal Riset Dan Inovasi Pendidikan Sains*.

Taliak, J., Al Farisi, T., Sinta, R. A., Aziz, A., & Fauziyah, N. L. (2024). Evaluasi Efektivitas Metode Pembelajaran Berbasis Proyek dalam Mengembangkan Kreativitas Siswa. *Journal of Education Research*, *5*(1), 583–589. https://doi.org/10.37985/jer.v5i1.876

Wardana, L. W., Narmaditya, B. S., Wibowo, A., Mahendra, A. M., Wibowo, N. A., Harwida, G., & Rohman, A. N. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy. *Heliyon*, *6*(9), e04922. https://doi.org/10.1016/j.heliyon.2020.e04922

Werang, B. R., Agung, A. A. G., Sri, A. A. P., Leba, S. M. R., & Jim, E. L. (2024). Parental socioeconomic status, school physical facilities availability, and students' academic performance. In *Edelweiss Applied Science and Technology* (Vol. 8, Issue 5, pp. 1–15). https://doi.org/10.55214/25768484.v8i5.1146

Zimmerman, B. J. (2000). Self-Efficacy: An Essential Motive to Learn. *Contemporary Educational Psychology*, *25*(1), 82–91. https://doi.org/10.1006/ceps.1999.1016.