The Effect of the Project-Based Learning Model on the Participation of Grade X Students in Economics Learning

Meliana Simanjuntak[1], Dearlina Sinaga[2], Mian Siahaan[3]
Pendidikan Ekonomi, Fakultas Keguruan Dan Ilmu Pendidikan, Universitas HKBP Nomensen, Medan, Indonesia
Email: meliana.simanjuntak@student.uhn.ac.id, dearlina.sinaga@uhn.ac.id, mian.siahaan@uhn.ac.id

Abstract

This study was conducted to identify the effect of using the Project Based Learning model on the participation of tenth-grade students in economics learning at SMA Swasta Yos Sudarso Medan. The research employed an experimental design with a quantitative approach to examine the relationship between variables. The subjects of this study were tenth-grade students, consisting of 31 students in class X-1 as the control group and 29 students in class X-2 as the experimental group. The research focused on investigating the relationship between the implementation of the Project Based Learning model and student participation in the learning process of economics.Data were collected through questionnaires and observation sheets to ensure the accuracy and validity of the findings. The results indicated that the t-value exceeded the t-table (7.677 > 2.052), with a significance value of 0.000, which is lower than the threshold of 0.05. This confirms that the application of the Project Based Learning model has a significant impact on student participation. The contribution of this learning model to student participation was found to be 68.8%, while the remaining 31.2% was influenced by other variables beyond the scope of this study

Keywords: *Project Based Learning Model, Student Participation*

INTRODUCTION

Education is crucial in human life because it plays a role in shaping a person's character, understanding, knowledge, and skills. The national education system is outlined in Law No. 20 of 2003, Article 1, which states:

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual religious strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves, society, nation and state.

In accordance with the definition of education above, education is so important that it must be well-organized and prepared to achieve the desired results. Through education, individuals will develop their potential and explore or develop the potential that already

exists within them. Therefore, education is a provision for creating individuals who are able to adapt and compete effectively. (Murdiono, Basuki, Pahlevi, Mohd, & Hashim, 2021).

In recent years, there has been a paradigm shift in learning, from a focus on teachers to a greater emphasis on the role of students. Project-based learning is an active and widely preferred learning method because it can help students understand lessons more easily. (Putri, Widyaningrum, & Pratiwi, 2024).

The project based learning (PjBL) approach emphasizes the use of projects as a learning medium, which is designed to increase active student participation during learning activities. (Purba, 2021) . The implementation of a project-based learning approach aims to produce students who are not only cognitively competent but also have the ability to collaborate and think creatively in completing learning tasks (Ibnatur Husnul, 2019).

In learning activities, the teacher's active role must be balanced with student participation, as student involvement is a crucial factor in achieving optimal learning outcomes. Student participation, both in terms of physical actions and psychological thinking, is the essence of participation in learning activities. (Agustina, Wahyudi, & Sri Putu Verawati, 2024).

To help students, economics lessons are crucial in helping them understand basic economic concepts and their impact on everyday life. Economics materials also serve as preparation for real-world economics. (Mahanani & Muchtar, 2019).

Referring to the practice of teaching economics in high school, the lecture method is still frequently used. This method is teacher-centered, which results in low student participation in the learning process. The lecture method in teaching economics often causes students to feel less interested, which results in low student participation in the learning process. (Yustina, Syafii, & Vebrianto, 2020).

Yos Sudarso Private High School, Medan, is located at Jalan KL Yos Sudarso No. 50, Medan City, North Sumatra Province. Based on the author's initial observations at Yos Sudarso Private High School, various problems emerged in economics learning, one of which was the lack of student readiness in participating in lessons. During teaching and learning activities, some students did not fully demonstrate participation in their assignments, and there were still students who were unsure of their abilities (Riadin & Jailani, 2021) . The low student participation was caused by the learning model, which in fact was still dominated by teachers using the lecture method. The lecture learning model made students bored and reduced their curiosity. (Meldawati, Hamid, & Mahdian, 2022) .

Based on the results of initial observations during the implementation of PPL at Yos Sudarso Private High School, Medan, researchers found the following conditions:

1. Some students still only play the role of listeners in class, with only a few actively participating in the learning process and only doing a little work when asked by the teacher without any initiative to contribute to group assignments.
2. Students are less brave in asking questions or giving opinions when learning is carried out using conventional methods.

The background of this research is the low level of student participation in the learning process. Therefore, the researcher wanted to determine the effect of the use of a project-based learning model on the level of participation of 10th-grade students in economics lessons at Yos Sudarso Private High School, Medan. (Shin, 2018) . With this research, it is hoped that student participation will increase compared to before the research was conducted

METHOD

The type of research chosen was quantitative with an experimental approach, where the research design chosen was a pre-test post-test using an experimental and control group or a one-group pretest-posttest design (Octaviyani, Kusumah, & Hasanah, 2020) . The selection of the initial and final survey designs in this study was intended to obtain an accurate picture of the effect of the treatment, by comparing the results before and after the application of different treatments (Pratiwi, Margunayasa, & Trisna, 2023) .

Table 1. Two-Group Before-After Design

Class	Initial Survey	Treatment	Final Survey
Experiment	O_1	X_1	O_3
Control	O_2	X_2	O_4

Yos Sudarso Private High School, Medan, was chosen as the research location because it addressed issues relevant to the study's focus. The research took place during the even semester of the 2024/2025 academic year, specifically from May 8–15, 2025 (Rohmawati, 2019).

The subjects in this study were individuals who served as the primary data source, namely class X students at Yos Sudarso Private High School, Medan. The sample was selected using a purposive random sampling technique, with class X-1 students of Yos Sudarso Private High School, Medan, as the control group and class X-2 students as the experimental group (Tueno, Arifin, & Arif, 2024).

The object of this study is the implementation of PjBL-based learning and student participation. Data collection techniques in this study were carried out in two ways, namely by using a questionnaire in the form of an instrument filled out directly by respondents when they first entered the class which functioned as an initial survey (Almazroui, 2023a) . In addition, data collection on the implementation of PjBL was carried out using teaching modules, learning implementation sheets (Wahyuni, Alam, & Laliyo, 2023). Descriptive statistical analysis was used to describe the research in the form of the average, standard deviation, maximum, and minimum of student participation before and after the implementation of the project-based learning model (Nisa, Saenab, & Muzayyana, 2023) .

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

To find out the summary of the research data, the following is a descriptive statistical analysis of student participation processed using SPSS Version 26. Data processing was carried out on participation in both groups, namely the experimental class and the control class, both in conditions before and after the learning treatment (Almazroui, 2023b) . Details of the results are presented in the table below:

Table 2. Descriptive Statistics of Student Participation

Statistics		Experimental Class		Control Class	
		Initial Survey	Final Survey	Initial Survey	Final Survey
N	Valid	29	29	31	31
	Missing	2	2	0	0
Mean		69.03	84.17	69.77	72.06
Standard Error of Mean		0.392	1,406	0.447	0.328
Median		69.00	83.00	70.00	72.00
Mode		70	76 [a]	71	72
Standard Deviation		2,113	7,569	2,486	1,825
Variance		4,463	57,291	6,181	3,329
Skewness		-0.732	0.145	-0.726	0.215
Standard Error of Skewness		0.434	0.434	0.421	0.421
Kurtosis		1,354	-0.940	-0.136	-0.841
Standard Error of Kurtosis		0.845	0.845	0.821	0.821
Range		10	27	9	6
Minimum		63	70	64	69
Maximum		73	97	73	75
Sum		2002	2441	2163	2234
Number of classes		6	6	6	7
Class length		2	5	2	1

Research Prerequisite Test
Normality Test

The normality test aims to identify whether the data in this study is normally distributed or not. The normality test was conducted on student participation data (variable Y) in the initial and final surveys in both the experimental and control classes (D. Sari & Lestari, 2018a) . The normality test was conducted using the Shapiro-Wilk test because the

number of data was less than 50 respondents. The following table presents information on the results of normality distribution or not:

Table 3. Results of Student Participation Normality

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Survawalpartisipasi_eks	0.149	29	0.101	0.949	29	0.174
Final_participation_survey	0.113	29	.200 [*]	0.958	29	0.297
Surveyparticipation_cont	0.166	29	0.040	0.932	29	0.063
Surveyfinalparticipation_kon	0.155	29	0.072	0.936	29	0.080

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

The table shows that the significance values of all variables exceed 0.05, namely the initial survey of student participation in the experimental class (0.174), the final survey of student participation in the experimental class (0.297), the initial survey of student participation in the control class (0.063), and the final survey of student participation in the control class (0.080). All significance values above 0.05 indicate that the data in this study are normally distributed (Pan, Shankararaman, Koh, & Gan, 2021) . Therefore, it is concluded that the data is worthy of further analysis using parametric statistical tests such as simple linear regression, f-test, and t-test.

Dta Analysis Techniques
Simple Linear Regression Analysis
The following is a simple linear regression test table obtained using SPSS version 26:

Table 4. Simple Linear Regression Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.828 [a]	0.686	0.674	4,320

a. Predictors: (Constant), Pjbl_eks

The regression equation is obtained as follows:

Y = a + bX

Y = 28,566 + 2, 114 X

Based on the simple linear regression shown, the interpretation is as follows:
a. The constant value (a) from the results of this study shows a value of 28.566

b. The regression coefficient (b) of 2.114 means that an increase in units in the implementation of PjBL will be followed by an increase in student participation of 2.114 units, assuming that other variables are held constant.

From the summary model obtained R = .828 [a] concluded that the correlation between X and Y is strong, and R^2 = 0.686 which means the R Square value shows that 68.8% of the variation in student participation can be explained by the application of the project-based learning model. Meanwhile, 31.4% allows that there are other factors not explained in this model that also influence the results.

Regression Significance Test (F Test)

The following is a table of SPSS data analysis on the regression significance test:

Table 5. Results of the Regression Significance Test

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1100,158	1	1100,158	58,939	.000 [b]
	Residual	503,980	27	18,666		
	Total	1604,138	28			

a. Dependent Variable: Final participation

b. Predictors: (Constant), Pjbl_eks

Hypothesis:

H_0 = The regression model is not significant with variables X and Y

H_1 = Significant regression model with relationship between variables X and Y

By making a decision F_{count} > F_{table} with the test results F_{count} = 58.939 > F_{table} = 4.21 and P = 0.000 < 0.005, it can be concluded from the data that the overall regression model by concluding the regression model is significant and it can be concluded that H0 [is] rejected and H1 [is] accepted. From the research findings, there is a significant relationship between the use of the project based learning model and the level of student participation (FIRDAUS, 2020) .

Discussion

The Influence of Project Based Learning Model on Student Participation

Data regarding the effect of the project-based learning model on student participation comes from the results of the final survey given to students in the experimental class who followed the model. Seeing the success of increasing student participation with T_{count} > T_{table} (7.677 > 2.052) , the sig part of the effect of the project-based learning model is known to be 0.000 <0.05. The increase in student participation in the experimental class can be attributed to differences in learning approaches, where the project-based learning model is applied (D. Sari & Lestari, 2018b) . As a result, the average student participation in the experimental class was higher compared to the control class which was given conventional

learning treatment. This is in line with research conducted by Sari & Febriani, (2024) which shows that there is an influence of the project-based learning model on student participation, and this is also in line with research conducted by Arthanissa, (2024) which says there is an influence of the project-based learning model on student participation.

It is known that the average student participation score according to the analysis results in economics learning was quite high after being treated with the project-based learning model. A simple linear regression analysis indicates that the implementation of the project-based learning model has a significant effect on increasing student participation. The R-square value of 0.686 indicates a 68.6% change in student participation (Aldabbus, 2018).

These findings are supported by teacher and student observation data, which indicate that the project-based learning process is active, structured, and engaging for students. Student involvement in every stage of the project, from planning to presentation, reflects the project-based learning model's ability to increase student engagement throughout the learning process (Krajcik, JS, & Blumenfeld, 2006) .

Results of Implementing the Project Based Learning Model

This research produces findings that are relevant to the formulated problem formulation, namely: "Is there an influence of the project-based learning model on the participation of class X students in economics learning at Yos Sudarso Private High School Medan?". Based on the process of analysis and interpretation of research data, the conclusion drawn is that there is indeed a significant and positive influence between the application of project-based learning on student participation (Farokhah, Herman, & Jupri, 2019) .

The results of this study support the initial objective of the study, which was to determine the extent to which the implementation of the project-based learning model impacted student participation in learning. The high level of student participation at each stage of the project demonstrates that the research objective was successfully achieved (Maradika, Alya Putri, Eni Kumalasari, Wulan Aulia Azizah, 2023) .

A comprehensive discussion shows that project-based learning provides a real and significant contribution to increasing student participation in economics (Maradika, Alya Putri, Eni Kumalasari, Wulan Aulia Azizah, 2023) . This finding aligns with constructivism theory, where meaningful learning occurs when students actively construct knowledge through direct experience and collaboration. The project-based learning model is an effective bridge between theory and practice in creating participatory, relevant, and enjoyable learning (Maradika, Kumalasari, Azizah, Widodo, & Nurkhikmah, 2023) .

Research Limitations

This study showed an increase in student participation with the implementation of project-based learning, between the experimental class that implemented the project-based learning model and the control class that was not given the treatment (Maudi, 2016) . However, this study also has several limitations. One is the limited scope of only one school and one grade level, and the independent variable only focused on project-based learning.

This study also did not delve deeper into other factors that could influence student participation, such as learning motivation, family support, or teacher teaching methods other than PjBL.

CONCLUSION

From the results of the analysis in chapter IV regarding the participation of class X students at Yos Sudarso Private High School, Medan after implementing the project based learning model, the following conclusions can be drawn:

1. The use of the project-based learning model has an effect on student participation in economics learning, as shown by the results of the regression test with a $_{calculated\ T\ value}$ greater than the T $_{table\ (calculated}$ t $7.677 >$ t $_{table}$ 2.052).
2. Student participation in economics learning has been proven to increase after the project-based learning model approach was implemented.

Suggestion

After seeing the research results and conclusions obtained, the researcher made the following suggestions:

1. For Teachers and Education Practitioners

It is hoped that economics teachers, particularly at the high school level, will consider implementing the project-based learning model as an effective alternative learning approach. This model can increase student participation and develop 21st-century skills such as collaboration, communication, creativity, and critical thinking. The implementation of this model should be designed systematically, tailored to the characteristics of the material andthe students' abilities.

2. For Schools

This research provides support to teachers in the form of training, facilities, and sufficient time for planning and implementing project-based learning models. Furthermore, school policies can be directed toward strengthening a culture of active learning and collaborative projects that encourage comprehensive student participation.

3. For Further Researchers

This study still has limitations, such as its scope being limited to one school and one grade level, and its independent variable focusing only on project-based learning. Therefore, future research is recommended to expand the sample size and examine other variables that may influence student participation, such as learning motivation or teacher teaching style.

The author fully acknowledges that this research is not without its shortcomings and errors, both intentional and unintentional. Therefore, to perfect and improve the quality of this scientific work, the author greatly appreciates constructive criticism, suggestions, and input from various parties. This is crucial for future evaluation and improvement.

The author also hopes that this thesis will not only provide benefits and insight for the author himself, but also serve as a useful reference for readers, particularly academics,

education practitioners, and other stakeholders in relevant fields. Hopefully, this work can make a positive contribution to the development of science and improving the quality of education

REFERENCES

Agustina, S., Wahyudi, W., & Sri Putu Verawati, N. N. (2024). Pengaruh Model Project Based Learning Berbantuan Simulasi Phet Terhadap Kemampuan Berpikir Kritis Fisika Peserta Didik Sman 8 Mataram. *Jurnal Pendidikan, Sains, Geologi, Dan Geofisika (Geoscienceed Journal)*, *5*(1), 75–80. Https://Doi.Org/10.29303/Goescienceed.V5i1.293

Aldabbus, S. (2018). Project-Based Learning : Implementation & Challenges. *International Journal Of Education, Learning And Development*, *6*(October).

Almazroui, K. M. (2023a). Project-Based Learning For 21st-Century Skills: An Overview And Case Study Of Moral Education In The Uae. *The Social Studies*, *114*(3), 125–136.

Almazroui, K. M. (2023b). Project-Based Learning For 21st-Century Skills: An Overview And Case Study Of Moral Education In The Uae. *The Social Studies*, *114*(3), 125–136. Https://Doi.Org/10.1080/00377996.2022.2134281

Arthanissa, F. (2024). *Efektivitas Model Project-Based Learning Terhadap Keterlibatan Siswa Pada Pelajaran Ipa Kelas Iv*. 96–104. Https://Doi.Org/10.12928/Sntekad.V1i1.15702

Farokhah, L., Herman, T., & Jupri, A. (2019). Sekolah Dasar Menggunakan Model Project Based Learning Dan Model Project Based Learning Dengan Teknik Mind Map. *Algoritma Journal Of Mathematics Education (Ajme)*, *1*(1), 1–13.

Firdaus, A. (2020). Analisis Kesulitan Belajar Siswa Pada Pembelajaran Ekonomi (Studi Kasus Pada Siswa Kelas Xi Sma Negeri 10 Kota Jambi). *Jurnal Analisis Kesulitan Belajar Siswa Pada Pembelajaran Ekonomi (Studi Kasus Pada Siswa Kelas Xi Sma Negeri 10 Kota Jambi)*. Opgehaal Van Https://Repository.Unja.Ac.Id/Id/Eprint/2616

Ibnatur Husnul, N. R. (2019). Penerapan Metode Problem Posing Untuk Meningkatkan Kualitas Pembelajaran Matematika Ekonomi Pada Mahasiswa Jurusan Akuntansi, Unversitas Pamulang Tahun Ajaran 2017/2018. *Jpm : Jurnal Pendidikan Matematika*, *6*(1), 15. Https://Doi.Org/10.33474/Jpm.V6i1.2961

Krajcik, J. S., & Blumenfeld, P. C. (2006). Project-Based Learning. In R. K. Sawyer (Ed.), The Cambridge Handbook Of The Learning Sciences. In *Cambridge University Press*.

Mahanani, P., & Muchtar, M. (2019). Perbedaan Hasil Belajar Mahasiswa Pgsd Menggunakan Model Inkuiri Dan Project Based Learning (Pjbl) Pada Matakuliah Pendidikan Kewarganegaraan Sekolah Dasar. *Sekolah Dasar: Kajian Teori Dan Praktik Pendidikan*, *28*(1), 43–49. Https://Doi.Org/10.17977/Um009v28i12019p043

Maradika , Alya Putri, Eni Kumalasari, Wulan Aulia Azizah, S. T. W. (2023). "Pengaruh Media Smart Box Dengan Model Project Based Learning Terhadap Hasil Belajar Pendidikan Pancasila Kelas Ii Sd Negeri Tugurejo 02 Materi Penerapan Nilai Pancasila". *Jurnal Ilmiah Pgsd Fkip Universitas Mandiri*, *9*(5).

Maradika ,Alya Putri, Eni Kumalasari, Wulan Aulia Azizah, S. T. W. (2023). "Pengaruh Media Smart Box Dengan Model Project Based Learning Terhadap Hasil Belajar Pendidikan Pancasila Kelas Ii Sd Negeri Tugurejo 02 Materi Penerapan Nilai Pancasila". *Jurnal Ilmiah Pgsd Fkip Universitas Mandiri*, 9(5).

Maradika, A. P., Kumalasari, E., Azizah, W. A., Widodo, S. T., & Nurkhikmah, A. (2023). Pengaruh Media Smart Box Dengan Model Project Based Learning Terhadap Hasil Belajar Pendidikan Pancasila Kelas Ii Sd Negeri Tugurejo 02 Materi Penerapan Nilai Pancasila. *Didaktik: Jurnal Ilmiah Pgsd Stkip Subang*, 9(5), 2206–2220. Https://Doi.Org/Https://Doi.Org/10.36989/Didaktik.V9i5.2181

Maudi, N. (2016). Implementasi Model Project Based Learning Untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa. *Jpmi (Jurnal Pendidikan Matematika Indonesia)*, 1(1), 39. Https://Doi.Org/10.26737/Jpmi.V1i1.81

Meldawati, M., Hamid, A., & Mahdian, M. (2022). Implementasi Model Project Based Learning (Pjbl) Berbantuan Aplikasi Modul Chemondroid Terhadap Kemampuan Berpikir Kreatif Pada Materi Tata Nama Senyawa. *Jcae (Journal Of Chemistry And Education)*, 6(2), 54–63.

Murdiono, A., Basuki, A., Pahlevi, A. S., Mohd, N., & Hashim, H. N. (2021). Inovasi Media Pembelajaran Pendidikan Ekonomi Berbasis Kecerdasan Buatan Terintegrasi (Integreted Artificial Intelegence) Dengan Ubiquitous Learning. *Jurnal Pendidikan Ekonomi*, 14(2), 179–187.

Nisa, U., Saenab, S., & Muzayyana, M. (2023). Peningkatan Minat Belajar Ipa Mealui Model Project Based Learning Dengan Pendekatan Tarl Di Smp Negeri 7 Sinjai. *Jurnal Pemikiran Dan Pengembangan Pembelajaran*, 5(2), 958–970. Https://Doi.Org/Https://Doi.Org/10.31970/Pendidikan.V5i2.684

Octaviyani, I., Kusumah, Y. S., & Hasanah. (2020). Peningkatan Kemampuan Berpikir Kreatif Matematis Siswa Melalui Model Project-Based Learning Dengan Pendekatan Stem. *Journal On Mathematics Education Research*, 1(1), 10–14.

Pan, G., Shankararaman, V., Koh, K., & Gan, S. (2021). Students' Evaluation Of Teaching In The Project-Based Learning Programme: An Instrument And A Development Process. *The International Journal Of Management Education*, 19(2), 100501. Https://Doi.Org/10.1016/J.Ijme.2021.100501

Pratiwi, K. I. A., Margunayasa, I. G., & Trisna, G. A. P. S. (2023). Project-Based Learning Interactive Multimedia With Orientation Of Environmental Problems Assisted By Articulate Storyline 3 For Grade V Elementary Schools. *Journal Of Education Technology*, 7(2), 332–342. Https://Doi.Org/10.23887/Jet.V7i2.59615

Purba, N. A. (2021). Media Pembelajaran Sebagai Salah Satu Penunjang Profesionalisme Guru Di Sekolah. *Skylandsea Profesional Jurnal Ekonomi, Bisnis Dan Teknologi*, 1(1), 48–51.

Putri, P. A., Widyaningrum, H. K., & Pratiwi, C. P. (2024). Pengaruh. Model Project Based Learning Berbantuan Media Digital Educaplay Terhadap Hasil Belajar Menulis Teks

Narasi Siswa Kelas Iv. *Seminar Nasional Sosial, Sains, Pendidikan, Humaniora (Senassdra)*, *3*(3), 452–460.

Riadin, A., & Jailani, M. (2021). Perbedaan Peningkatan Hasil Belajar Ekonomi Dengan Menerapkan Model Cooperatif Tipe Nht (Numbered Head Together) Dan Tipe Ioc (Inside Outside Circle) Pada Peserta Didik Sma Muhammadiyah 1 Palangkaraya. *Pedagogik: Jurnal Pendidikan*, *14*(2), 60–70. Https://Doi.Org/10.33084/Pedagogik.V14i2.1042

Rohmawati, L. (2019). Pengaruh Metode Pembelajaran Ioc (Inside Outside Circle) Terhadap Keaktifan Dan Prestasi Belajar Siswa (Studi Eksperimen Siswa Kelas X Sma Nu Widasari Pada Mata Pelajaran Ekonomi). *Equilibrium: Jurnal Penelitian Pendidikan Dan Ekonomi*, *15*(02), 1–15. Https://Doi.Org/10.25134/Equi.V15i02.1615

Sari, D., & Lestari, N. D. (2018a). Pengaruh Media Pembelajaran Visual Terhadap Hasil Belajar Ekonomi Siswa. *Jurnal Neraca: Jurnal Pendidikan Dan Ilmu Ekonomi Akuntansi*, *2*(2), 71–80. Https://Doi.Org/10.31851/Neraca.V2i2.2690

Sari, D., & Lestari, N. D. (2018b). Pengaruh Media Pembelajaran Visual Terhadap Hasil Belajar Ekonomi Siswa. *Jurnal Neraca: Jurnal Pendidikan Dan Ilmu Ekonomi Akuntansi*, *2*(2). Https://Doi.Org/10.31851/Neraca.V2i2.2690

Sari, N. W., & Febriani, E. A. (2024). *Pengaruh Penggunaan Model Project Based Learning (Pjbl) Terhadap Partisipasi Belajar Peserta Didik Dalam Pembelajaran Sosiologi Di Kelas Xi Sma N 1 Baso*. *3*, 402–410.

Shin, M.-H. (2018). Effects Of Project-Based Learning On Students' Motivation And Self-Efficacy. *English Teaching*, *73*(1), 95–114. Opgehaal Van Http://Journal.Kate.Or.Kr/

Tueno, Y. R., Arifin, I. N., & Arif, R. M. (2024). Pengaruh Penggunaan Model Pembelajaran Project Based Learning Berbantuan Media Interaktif Berbasis Digital Genially Terhadap Hasil Belajar Siswa Pada Pembelajaran Ipa Kelas V Sdn 13 Telaga Biru. *Didaktik: Jurnal Ilmiah Pgsd Stkip Subang*, *10*(2), 1649–1657. Https://Doi.Org/Https://Doi.Org/10.36989/Didaktik.V10i2.3282

Wahyuni, R. D. I., Alam, H. V., & Laliyo, L. A. R. (2023). Strengthening The Profile Of Pancasila Students Through Extracurricular Activities Of The Project Learning-Based Waste Bank Program (Pjbl). *Novateur Publications*, (1), 113–124. Opgehaal Van Http://Novateurpublication.Org/Index.Php/Np/Article/View/75

Yustina, Y., Syafii, W., & Vebrianto, R. (2020). The Effects Of Blended Learning And Project-Based Learning On Pre-Service Biology Teachers' Creative Thinking Skills Through Online Learning In The Covid-19 Pandemic. *Jurnal Pendidikan Ipa Indonesia*, *9*(3), 408–420. Https://Doi.Org/10.15294/Jpii.V9i3.24706