

# The Implementation of Project-Based Learning and Discovery Learning Models on Students' Writing Narrative of SMA Swabina Karya Medan

Sayumen Manao<sup>1</sup>, Sondang Manik<sup>2</sup>, Lastri W. Manurung<sup>3</sup>, Erika Sinambela<sup>4</sup>

<sup>1,2,3,4</sup>Universitas HKBP Nomensen, Medan, Indonesia

<sup>1</sup>sayumem49@yahoo.com

## Abstract

The study dealt with the implementation of project-based learning (PjBL Model) and discovery learning (DL Model) on students' writing narrative of SMA Swabina Karya Medan. It is aimed to describe the students' writing narrative ability before taught by PjBL and DL models, to show the students' writing narrative ability after taught by PjBL and DL models, to find out the differences effect of the implication between PjBL and DL models on the students' writing narrative ability. This study was quasi experimental research. It was carried out with 2 classes which was treated such as the experimental class-1 and experimental class-2 which was given test; pre-test and post-test at the same time. Writing narrative test was a data. The result of the study found that the students' writing narrative ability before implemented by PjBL and DL models showed lower. It proved that in experimental class-1, 31 (88.57%) students was not got categorized fail and in experimental class-2, 29 (82.86%) students was categorized fail. The students' writing narrative ability after implemented by PjBL and DL models showed higher. It proved that in experimental class-1, all the students or 100% students was categorized pass and in experimental class-2, 19 (54.29 %) students was categorized pass. There was found a differences effect of the implementation PjBL and DL models on the students' writing narrative ability. It proved from the result of Wilcoxon test showed  $-5.174 < -5.169$ . It means  $H_0$  was accepted.

**Keywords:** Discovery Learning, PjBL, Writing Narrative.

## Introduction

Learning activities in schools began to normal after the Covid-19 pandemic, so educational institutions began reorganizing the teaching and learning process according to the student's needs at school, especially in teaching English. The teacher must increase students' skills in learning English better not only in speaking, reading, and listening but also in writing. Aliyu (2020) states that writing skill has a vital role in English as a Foreign Language (EFL) learning because it is needed in supporting the student's academic success. This quotation means that writing skills requires EFL learners to employ their linguistic competence to generate the main idea, support the idea, sum up the concept of the experts, have sufficient knowledge of diction choice, topic selection, punctuation, make good connection among sentences, and find appropriate references.

Through writing skills, the students can express their thoughts in sentences that are structured completely and clearly, so that these thoughts can be communicated to the reader. Syafi'ie (2018:340) says that writing skill is putting ideas, intentions, feelings of hope, will, and information into writing that is sent to other people. It means that to write well, students must have good capabilities in writing such organizing ideas, constructing sentences, putting suitable

punctuation, and using cohesive and coherent paragraphs and texts. Then, Khazrouni (2019) writes that writing skill is a thinking tool for the other three language skills and language components, such as vocabulary, pronunciation, and grammar. It means that writing skill has an important role in students developing several skills in their English learning, such as analyzing, arguing, and critical thinking skills.

In teaching writing, most of the students still think that writing is a difficult task. They do not know how and what to write, feel less vocabulary, difficult to develop and organize ideas, especially in writing a narrative. Narrative describes a series of events or experiences sequentially based on time to time. Herman (2017) states that narrative tells the activities or events in the past, shows problematic experiences and resolution means to amuse or to give a moral lesson to the readers. Then, Mulyanti (2016:105) says that a narrative is an essay that contains themes, messages, and events, and sets the target audience. This means that when the students make good and ideal narrative, they must comply with several rules, namely determining the theme and mandate, setting the target audience, designing the main events to be displayed in the form of a flow chart, dividing the main events into the beginning, development, and the ending of the story, and detailing the events.

The students' ability to write narrative still does not give satisfactory results because they do not reach the minimum completeness criteria (KKM) score of 70. This is based on the results of an interview conducted on Monday, 14th November 2022 with Mrs. Rosmita who is the English teacher at SMA Swabina Karya Medan. The teacher's information stated that the average score of students' narrative essays was only around 40-50, which means that only 20% of students were able to achieve the KKM score. The low value of writing student narratives is due to the difficulty of students determining themes and moral messages. Students' difficulties in getting main ideas or thoughts make them have minimal words to write a good narrative. In addition, students who are not able to write down what message they want to convey in their writing is a particular difficulty because it involves a moral message that is conveyed as a solution to the problem or the end of the problem in the narrative.

When the observations were done on 12th November 2022 in class X of SMA Swabina Karya Medan, it was known that the class situation when teaching writing was not as expected. The process of teaching does not suitable for the National Learning Objectives, where active, creative, and innovative students. During the teaching-learning process, the teacher only gave explanations to students, so students were as passive and only a few students paid attention to the teacher's explanation. The class conditions during teaching are very noisy and uncomfortable. The teacher did not often invite students to practice students' writing in front of the class, there is no discussion and the students' assignments are only to listen and record what the teacher instructs so the learning objectives have not been achieved optimally maximum.

Beside the implementation of PjBL model, discovery learning (DL) model is also able to help the students in writing narrative. Discovery learning is a learning model recommended by 2013 curriculum to be applied in developing students' critical thinking skills (Kementerian Pendidikan dan Kebudayaan (2013). Then, Putri (2017) states that DL model is a model used to develop ways of learning students actively find independently, process-oriented, self-directed, and reflective. These quotations imply DL model is an appropriate learning model to lead students to play an active role and think critically in finding knowledge through direct investigation.

Based on the explanation of two teaching models, it can be explained that PjBL and DL models are scientific learning models where the students are expected to master their subject matter with the ability to develop critical, creative and innovative thinking. However, in the

learning process, PjBL and DL models have differences, in the PjBL model, students are faced with completely complex problems that require students to investigate to understand them and end with a product. Whereas, in DL model, the raising problem is created by the teacher. Students are expected to be able to find their own knowledge that was used to solve a problem.

## Method

This research was quasi experimental research. Boomsma, et al (2019) assumes the purpose of quasi-experimental design is to evaluate the change in a subject's result which is caused by receiving the treatment. This means that the research was be carried out with 2 classes which was treated such as the experimental class- 1 and experimental class-2 which was given test; pre-test and post-test at the same time.

This research was conducted at SMA Swabina Karya Medan which is located on Pelajar No 10 Pulo Bayan Medan. The time of research was carried out for 3 months from August to October 2023. In this study, the population of this research was the ten grade students of SMA Swabina Karya Medan. The total number of population was 125 students which were divided into two classes, they are X-A, X-B, and X-B classes.

In this study, the instrument of the test was collected from writing narrative test. This test was aimed to know the effect of implementing PjBL and DL Models on the student's writing narrative. Students is asked to write narrative entitled Sangkuriang.

## Result

### *The Result of Students' Writing Narrative in Experimental Class-1 (PjBL Model)*

The results of the post-test described the students' writing narrative in experimental class-1. This test was given to the students after received PjBL model. It was aimed to know the students' improvement skill in writing narrative. The result post- test score of the students' writing narrative can be seen in the appendix 1. After tabulating the students' score in writing narrative, then, the score was made into frequency distribution to know how many the number of times the value occurs in the data possibly. It can be shown as follows.

Table 1. Frequency Distribution of Students' Writing Narrative Test of Post-Test in Experiment-1 Class

<b>Post-test</b>				
	Freque ncy	Percent	Valid Percent	Cumulative Percent
70.00	11	31.4	31.4	31.4
73.00	1	2.9	2.9	34.3
75.00	8	22.9	22.9	57.1
80.00	7	20.0	20.0	77.1
83.00	1	2.9	2.9	80.0
84.00	1	2.9	2.9	82.9
85.00	3	8.6	8.6	91.4
90.00	3	8.6	8.6	100.0
Total	35	100.0	100.0	

Table 1 describe the distribution frequency of the data. This table explained the number of times the score occurs in the data. The scores of 73, 83, 84 occurred for 1 times, scores

of 85, 90 occurred for 3 times, scores of 75 occurred for 8 times, score 70 occurred for 11. After knowing the number of times, the score occurs in the data, it made the minimum, maximum, mean, standard deviation and variance to represent a set of data in statistical analysis as follows.

Table 2. Minimum, maximum, Mean, Standard Deviation, and Variance Scores of the Test Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
PreTest Valid N (listwise)	35 35	70	90	77.00	6.494	42.176

Table 2 described 70 for the minimum, 92 for maximum score, 77.00 for mean, 6.494 for standard deviation and 42.176 variance. All this score was aimed to show a set of data in statistical analysis. Then, to know the level of students' ability in writing narrative in pre-test, there are 3 categorized in experimental class-1. They are:

Tabel 3. The Level of Students' Writing Narrative of Post- Test in Experiment-1 Class

No	Interval	Frequency	Percentage (%)	The Level of Students' Writing Narrative
1	90-100	3	8.57	Higher
2	79-89	12	34.29	High
3	69-78	20	57.14	Medium
Total Number		35	100%	

Tabel 3 described 20 (57.14%) students were categorized as medium, 12 (34.29%) students were categorized as high, 3 (8.57%) students were categorized as higher. Based on the KKM criteria, the students who pass if they were got score above of 70 and students who fail if they were got score below of 70. In this study, all the students (100%) were categorized pass. This result described that the ability of students' writing narrative in the post-test for the experiment-1 class gave satisfy.

It means that the students' ability in writing narrative satisfy and it was enough for researcher's expectations because all the students had the ability to write narrative.

### ***The Result of Students' Writing Narrative in Experiment-2 Class (DL Model)***

The results of the study described the students' writing narrative in experimental class-2 who was taught by DL in post-test. The test was given to the students to know the improvement skill of the students in writing narrative. The result post- test score of the students' writing narrative can be seen in the appendix 2. After tabulating the students' score in writing narrative, then, the score was made into frequency distribution to know how many the number of times the value occurs in the data possibly. It can be shown as follows.

Table 4. Frequency Distribution of Students' Writing Narrative of Post-Test Test in Experiment-2 Class

		Posttest			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50.00	1	2.9	2.9	2.9
	53.00	1	2.9	2.9	5.7
	55.00	2	5.7	5.7	11.4
	60.00	7	20.0	20.0	31.4
	65.00	5	14.3	14.3	45.7
	70.00	11	31.4	31.4	77.1
	73.00	1	2.9	2.9	80.0
	75.00	3	8.6	8.6	88.6
	80.00	1	2.9	2.9	91.4
	85.00	1	2.9	2.9	94.3
	90.00	2	5.7	5.7	100.0
	Total		35	100.0	100.0

Table 4 describe the distribution frequency of the data. This table explained the number of times the score occurs in the data. The scores of 50, 53, 73, 80, 85 occurred for 1 times, scores of 55, 90 occurred for 2 times, scores of 75 occurred for 3 times, score 65 occurred for 5 times, and score 70 occurred for 11 times. After knowing the number of times the score occurs in the data, it made the minimum and maximum scores, mean, standard deviation and variance as follows.

Table 5. Minimum, Maximum, Mean, Standard Deviation and Variance of the Test Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Post Test	35	50	90	67.74	9.385	88.079
Valid N (listwise)	35					

Table 5 described 50 for the minimum, 90 for maximum score, 67.74 for mean, 9.385 for standard deviation and 88.079 variance. All this score was aimed to show a set of data in statistical analysis. Then, to know the level of students' ability in writing narrative in post-test, there were 3 categorized in experimental class-2. They are:

Table 6. The Level of Students' Writing Narrative of Post- Test in Experimental Class-2

No	Interval	Frequency	Percentage (%)	The Level of Students' Writing Narrative
1	80-90	4	11.43	Higher

2	69-79	15	42.86	High
3	58-68	12	34.29	Medium
Total Number		35	100%	

Tabel 6 described 4 (11.43%) students were categorized as low, 12 (34.29%) students were categorized as medium, 15 (42.86%) students were categorized as high, and 4 (11.43%) students were categorized as higher. It means that 16 (45.71%) students were categorized fail because they got score below 70 and only 19 (54.29%) students was categorized pass because they got score above 70. It showed that the ability of students' writing narrative in the post-test for the experimental class-2 still did not give satisfy because only 19 (54.29) of students were achieved the KKM.

Based on the interviews on August 22, 2023 with students, it was known that DI model help the students to overcome their problem in writing narrative. Some students gave comments toward DL model that this model made them more active in thinking, discussing, and expressing opinions. They can write good writing through simulation, problem statement, data collection, data processing, verification, and generalization. Therefore, they were easier to write stories in a sequenced and structured way. On the other hand, some students still difficult to develop their creativity and knowledge in organizing the event of writing. That is why they did not know how to write storylines based on the time and to who, where, and what message they wanted to convey for to the reader. It means that DL model help some students in their writing narrative, and some students still find difficult in their writing.

## Discussion

### ***The Result of Students' Writing Narrative in Experimental Class-1 (PjBL Model)***

Based on the interviews on August 22, 2023 with students, it was known that PjBL model help the students to overcome their problem to write down several main events, storylines, and mention to who, where, and what message they wanted to convey for the reader. It means that PjBL model made the students to develop writing narrative through their thinking creativity. The students gave the project to overcome their writing narrative through planning, implementation, and reporting. In this project, they are encouraged to use their critical thinking and creativity to solve problems by using their knowledge and skills, work together, help one another, explain one another, and show patience with each other.

### ***The Result of Students' Writing Narrative in Experiment-2 Class***

Based on the interviews on August 22, 2023 with students, it was known that DI model help the students to overcome their problem in writing narrative. Some students gave comments toward DL model that this model made them more active in thinking, discussing, and expressing opinions. They can write good writing through simulation, problem statement, data collection, data processing, verification, and generalization. Therefore, they were easier to write stories in a sequenced and structured way. On the other hand, some students still difficult to develop their creativity and knowledge in organizing the event of writing. That is why they did not know how to write storylines based on the time and to who, where, and what message they wanted to convey for to the reader. It means that DL model help some students in their writing narrative, and some students still find difficult in their writing.

When the students' writing narrative did not give satisfactory results because they did not create the main events, made the chronological order to stress the part of the conflict, as the consequence, they did not reach the minimum completeness criteria (KKM). To overcome the students' problem in writing narrative, it is wisely to use PjBL because this model makes

students can use their critical thinking, creativity, collaborative ability, decision making, and problem-solving skill.

Based on the findings of study, it can be described PjBL model was significant than Discovery Learning on the students' writing narrative. It means that PjBL model was effective to increase the students' writing narrative. Through this model, the students lead to focus their thinking creativity, critically, and work together to improve their writing skills. Wardani et.al (2021) in their research found that PjBL significantly improves students' writing skill of the Grade IX students. In this study, they explained that PjBL promoted students' critical thinking, creativity, collaborative work, and enhances teacher's satisfaction in teaching than Inquiry on students' writing skill of grade IX students. This research also support by Nurfadhilah (2020) who described there is a significant influence of students who was taught by PjBL on the ability to write narrative texts of class X students of SMA Negeri 1 Tangerang. The result of study found that PjBL with the help of infographics in teaching writing narrative texts gave better results compared to using conventional models. Through PjBl, the students more opportunities to develop their ideas as creativity, critically, work together in their writing narrative.

The contrarily to the result of the study previously, Assyahbana (2019) explained that PjBL model by using posters was not able to provide satisfactory results for improving the students' writing narrative texts. It was caused by the teacher did not apply the procedure of project-based learning completely. The teacher had not given the student knowledge both theoretical and practical about this model of how to develop their ideas creatively and criticalkl in writing narrative. The teacher did not pay attention to the process of writing that was very crucial to be learned for the student. As a result, the students did not know how to arrange the words became a good sentence, and they did not know using grammar appropriately

## Conclusion

Based on the data analysis, it can be concluded that:

- 1) The students' writing narrative ability before implemented by PjBL and DL models showed lower. It proved that in experimental class-1, 31 (88.57%) students was not got categorized fail and in experimental class-2, 29 (82.86%) students was categorized fail.
- 2) The students' writing narrative ability after implemented by PjBL and DL models showed higher. It proved that in experimental class-1, all the students or 100% students was categorized pass and in experimental class-2, 19 (54.29 %) students was categorized pass.
- 3) There was a differences effect of the implementation PjBL and DL models on the students' writing narrative ability. It proved from the result of Wilcoxon test showed  $-5.174 < -5.169$ . It means  $H_a$  was accepted.

## References

- Aliyu, M. M. 2020. Exploring The Nature of Undergraduates' Peer Collaboration in a PBL Writing Process. *International Journal of Language Education*, 4(1), 11–23. <https://doi.org/10.26858/ijole.v4i2.8406>
- Alotaibi, Majed Ghazai *English Language Teaching*, Vol 13 No. 7.
- Arrasyid, M. 2017 *Kesulitan Siswa Dalam Menulis Karangan Narasi di Min 1 Teladan Palembang*. Skripsi. Program Studi Pendidikan Guru Madrasah Ibtidaiyah. Fakultas Ilmu Tarbiyah dan Keguruan UIN Raden Fatah. Palembang.
- Arwaty and Lullulangi, M. 2022. Discovery Learning Model as an Effort to Increase Student Interest and Learning Outcomes. Volume 8 Number 1 April 2022

- Avionitha, C. 2021. The Implementation of Discovery Learning Method in Teaching Writing Narrative Text. Edutama (Unpublished)
- Bandura, F and Walters, F. 2016. Self-Efficacy: The Exercise of Control. *Journal of Cognitive Psychotherapy*.<https://doi.org/10.1891/0889-8391.13.2.158>
- Bell, S. 2010. Project-Based Learning for the 21st Century: Skills for the Future. *The Clearing House. A Journal of Educational Strategies, Issues and Ideas*, 83 (2), hlm. 39–43
- Biazus, M and Mahtari, S. 2022. The Impact of Project-Based Learning (PjBL) Model on Secondary Students' Creative Thinking Skills. *International Journal of Essential Competencies in Education*. <https://journal-center.litpam.com/index.php/ijece/index> June 2022 Vol. 1, No. 1
- Boardman, Cynthia. 2008. *Writing to Communicate*. California/America : Pearson Logman
- Borthick, A. F. & Jones, D. R. 2000. The Motivation for Collaborative Discovery Learning Online and its Application in an Information Systems Assurance Course, *Issues in Accounting Education* Vol 15 No. 2. Retrieved from: <https://pdfs.semanticscholar.org/0e63/fc731940270f4524dd67dbe81978250eb12c.pdf>
- Brown, H. G. 2001. *Teaching by Principles: Interactive Approach to Language Pedagogy*. New York : San Francisco State University.
- Burais, L., Ikhsan, M., and Duskri, M. 2016. Peningkatan Kemampuan Penalaran Matematis Siswa Melalui Model Discovery Learning. *Jurnal Didaktik Matematika*, 3(1), 77–86.
- Dalman, H. 2017. *Keterampilan Menulis*. Jakarta: Raja Grafindo Persada.
- Darmojo, H dan Kaligis, J. 2012. *Pendidikan IPA II*. Jakarta: Depdikbud, Dirjen Dikti Proyek Pembinaan Tenaga Kependidikan.
- Deviga, L and Ardhani , R. 2022. Using Picture Series in Teaching Writing Skill for the Second Semester Students of Medical Record Program in STIKES Bhakti Husada Mulia Madiun . *journal ilmu Pendidikan holistic*. Vol 1 no. 2
- Djiwandono, S.E. 2006. *Psikologi Pendidikan*. PT Gramedia Widiasarana Indonesia.
- Dorier, J. L., and García, F. J. 2013. Challenges and Opportunities for the Implementation of Inquiry-Based Learning in Day-to-Day Teaching. *ZDM - International Journal on Mathematics Education*, 45(6), 837–849. <https://doi.org/10.1007/s11858-013-0512-8>
- Giawa, I. 2022. The Effect of Project Based Learning and Problem Based Learning in Writing Narrative Text. *International Journal of Educational Research Excellent (IJERE)* . Vol. 1 No. 1
- Grant, M.M. 2002. *Getting A Grip On Project-Based Learning: Theory, Cases And Recommendations*. North Carolina: Meridian A Middle School
- Computer Technologies. Journal*, Vol. 5. Hal: 1-3, (online) (<http://www.ncsu.edu/meridian/win2002/514/project-based.pdf>).
- Gustafson, K. 2002. *Survey of Instructional Development Model*. New York: Eric Clearinghouse on Information & Technology Syracuse University
- Harmer, N. 2014. *Project Based Learning*. Plymouth University.
- Harmer, J. 2015. *The Practice of English Language Teaching* 3 ed, United Kingdom: Longman Publishing.
- Herman, A. 2017. *Narrative Writing Intervention Plan: Analysis Of Students Literacy Learning Needs*. *Proceeding of The 1st International Conference On Language Literature And Teaching (ICoLLiT)*. Surakarta: Muhammadiyah University Press.
- Hidayati, N. 2016. Pembelajaran Discovery Disertai Penulisan Jurnal Belajar untuk Meningkatkan



- Kemampuan Kerja Ilmiah Siswa Kelas VIII. 1 SMP Negeri 1 Probolinggo. *Jurnal Penelitian Pendidikan IPA*, 1(2), 52–61.
- Hosnan. 2014. Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21. Bogor : Ghalia Indonesia.
- Hutchinson, J. W. 2017. Dimensions of Consumer Expertise. *Journal of Consumer Research*, 13(4), 411–454.
- Joolingen, W. 2019. Cognitive Tools for Discovery Learning. *International Journal of Artificial Intelligence in Education (IJAIED)*.
- Joyce, M and Weil, E. 2016. *Models of Teaching*. Yogyakarta: Pustaka Belajar
- Kementerian Pendidikan dan Kebudayaan. 2013. *Materi Pelatihan Guru Implementasi Kurikulum 2013*. Jakarta: P dan K.
- Keraf, G. 2014. *Diksi dan Gaya Bahasa*. Jakarta: PT Gramedia Pustaka Utama
- Khazrouni, M .2019. Assessment For Improving Esl Learners' Writing Skills Among Undergraduate Students: A Case Study Of Skyline University College. *International Journal of English Language Teaching*, 7 (1). pp. 30-44. ISSN 2055-0820
- Kosasih, E. 2014. *Strategi Belajar dan Pembelajaran Implementasi Kurikulum 2013*. Bandung: Yrama Widya
- Mayer, R. E. 2004. Should There Be a Three-Strikes Rule Against Pure Discovery Learning? The Case for Guided Methods of Instruction. *Journal of American Psychologist*, Vol. 59 No. 1.
- Mulyasa, E. 2014. *Implementasi Kurikulum 2013*. Bandung: PT Remaja Rosdakarya
- Mulyati. 2016. *Terampil Berbahasa Indonesia*. Jakarta: Kencana.
- Ngalimun. 2014. *Strategi dan Model Pembelajaran*. Yogyakarta: Aswaja Pressindo.
- Nugraha, T. 2022. *Kurikulum Merdeka untuk Pemulihan Krisis Pembelajaran*. *Inovasi Kurikulum*. Vol. 19 No. 2.
- Nurmahyuni, A, Rajagukguk, S, Sitepu, V, Siregar, P, and Novri, A. 2021. The Effect of Project-Based Learning on Students' Achievement in Writing Narrative Text. *Journal of English Language and Education* <https://doi.org/10.31004/jele.v6i2.170>
- Nursito. 1999. *Kiat Menggali Kreativitas*. Yogyakarta: Mitra Gama Media
- Putri, I. S. 2017. Pengaruh Model Pembelajaran Discovery Learning Terhadap Hasil Belajar Siswa dan Aktivitas Siswa. *Jurnal Pendidikan Fisika* , 91-94
- Rahardjanto, A. 2019. Hybrid-PjBL: Learning Out- comes, Creative Thinking Skills, and Learning Motivation of Preservice Teacher. *International Journal of Instruction*, 12(2), 179-192.
- Rofi'udin, A 2018. *Pendidikan Bahasa dan Sastra Indonesia di Kelas Tinggi*. Malang: Universitas Malang.
- Rohani, A. 2004. *Pengelolaan Pengajaran*. Jakarta. PT. Rineka Cipta.
- Sagala, S. 2009. *Konsep dan Makna Pembelajaran*. Bandung: CV.
- Scrivener, J, 2015. *Learning teaching: A Guidebook for English Language Teacher*. London: Macmilland.
- Sirait, B. 2015. *Pedoman Karang Mengarang*. Jakarta: Depdikbud.
- Sugiarti, Husain, Halimah. 2017. An Influence of the Contextual-Based Discovery Learning Model on the Academic Honesty of High School Students
- Sugiyono. 2016. *Metode Penelitian Kuantitatif dan Kualitatif* .Bandung: PT Alfabet.
- Suryosubroto. 2002. *Proses Belajar Mengajar di Sekolah*. Jakarta: Rineka Cipta.
- Stoller, F. 2006. *Establishing a Theoretical Foundation for Project-Based Learning in Second and Foreign-Language Contexts*. Greenwich: Information Age Publishing.
- Susanti, Y, Asty, H, and Sesmiyanti. 2022. An Analysis of Discovery Learning Model Used in Teaching Narrative Text at Tenth Grade of SMAN 1 Koto Salak Dharmasraya. *Jurnal*

Pendidikan Tambusai . Volume 6 Nomor 1 Tahun 2022

- Syafi'ie, I. 2018. Retorika dalam Menulis. Jakarta: Depdikbud.
- Thanavathi, C. 2022. Models of Teaching: Meaning, Definitions, and Function-Models: Philosophical Teaching Models: Insight Model (Plato) Impression Model (Jhon Locke) And Rule Model (Kant)-Psychological Models: Basic Teaching Model (Robert Glasser). <https://www.researchgate.net/publication/358641922>
- Thomas, J.W. 2019. Project Based Learning: A Handbook of Middle and High School Teacher. New York: The Buck Institute for Education.
- Thomas, J. W. 2000. A Review of Research on PBL. <http://www.bobpearlman.org/BestPractices/PBLResearch.pdf>
- Tsybulsky, D., and Rozanov, M. 2019. The Development of Student-Teachers' Professional Identity While Team-Teaching Science Classes Using A Project-Based Learning Approach: A Multi-Level Analysis. *Teaching and Teacher Education*, 79, 48-59.
- Twelker, P., Urbach., Floyd., D, and Buck, J. 2008. *The Systematic Development of Instruction*. Stanford: ERIC Clearinghouse on Media and Technology.
- Uno, H dan Mohammad, N. 2012. *Belajar Pendekatan dengan Palkem*. Jakarta : Bumi Aksara.