IMPLEMENTATION OF PROJECT-BASED LEARNING TO IMPROVE STUDENTS LEARNING ACTIVITIES

Anggi Ulul Hasanah[1,*], Windy Ekowati[2], Siti Lestari[3]
[1,3]Universitas PGRI Semarang
[2]SMA Negeri 5 Semarang

*E-mail: anggiiulul@gmail.com

ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya aktivitas belajar siswa pada proses pembelajaran di SMA N 5 Semarang khususnya pada kelas X-7. Penelitian ini bertujuan untuk meningkatkan keaktifan belajar siswa kelas X-7 melalui penerapan model pembelajaran berbasis Proyek *(Project-based Learning)*. Data penelitian dikumpulkan dengan menggunakan pedoman observasi yang dilakukan dalam dua siklus dengan subjek penelitian yakni 36 siswa. Data penelitian ini dianalisis menggunakan model dari Miles & Huberman yang mana terdiri dari 3 tahap; reduksi data, display data, dan pengambilan kesimpulan. Hasil penelitian menunjukkan adanya peningkatan keaktifan belajar siswa, yaitu dari 36 siswa terdapat 12 siswa mencapai angka 33,33% pada pra siklus dan meningkat menjadi 55,56% dengan jumlah siswa 20 pada siklus 1. Keaktifan belajar siswa meningkat pada siklus 2 menjadi 86,11% dengan jumlah siswa 31 orang. Dengan adanya penelitian ini, menunjukkan bahwa penerapan sintaks PjBL dengan pemberian materi kontekstual terkait lingkungan siswa dapat meningkatkan keaktifan belajar siswa secara signifikan.
Keywords: keaktifan belajar, Project-based learning

ABSTRACT

This research was motivated by the low level of student learning activities in the learning process at SMA N 5 Semarang specifically in grade X-7. This research aims to increase students' learning activities in grade X-7 through the implementation of the Project-based learning model. There were 36 students as the research subjects. The research data were collected using observation guideline which carried out in two cycles. The data was analyzed using Miles & Huberman model which consisted of three steps; data reduction, data display, and conclusion drawing. The research results showed that there was an increase in students' learning activities, specifically out of 36 students, there were 12 students reached a rate of 33.33% in pre-cycle and increased to 55.56% with a total of 20 students in cycle 1. Student learning activities increased in cycle 2 to 86.11% with a total of 31 students. The research results discover that the implementation of each syntax of PjBL by giving contextual material related with students' environment significantly improved students' learning activities.
Keywords: learning activities, Project-based learning model

1. INTRODUCTION

In the archipelago of Indonesia, a nation defined by its rich cultural diversity and breathtaking natural beauty, the importance of learning English for Indonesian students is undeniable. As the world becomes increasingly interconnected, English has emerged as a global communication tool, breaking down barriers and opening doors to limitless possibilities. For Indonesian students, mastering English is not merely a skill but a gateway to a brighter future. It enhances employability, broadens horizons through access to a vast array of global knowledge, fosters international friendships, and empowers them to actively participate in the global community.

In line with the recent education curriculum in Indonesia, Merdeka Curriculum discovers innovative, creative, and independent teaching and learning for both students and teachers (Sherly et al., 2020). In addition, Merdeka Belajar not only evaluates students' intellectual abilities in the form of scores but also takes into account their moral development and skills in specific fields

(Yunita & Widodo, 2023). Moreover, it promotes student-centered learning, critical thinking, and creativity. Therefore, students are able to learn based on their need and reach learning objective. It automatically considers making learning process more valuable and meaningful. Hence, teacher must prepare learning activities with suitable learning model and assessment which is in line with students' characteristics and needs (Tricahyati & Zaim, 2023).

In designing learning activities, teachers must decide the proper learning model based on the characteristic of the class. The Ministy of Education and Culture recommends some learning models that promote student-centered learning includes Problem-based Learning (PBL), Project-based Learning (PjBL), Inquiry, and Discovery Learning (Suharto et al., 2020). By arranging learning model that suits with classroom circumstance, students are able to enjoy the learning process so that can achieve learning objectives.

Based on the observations during the first teaching practice that guided by *pamong* teacher in grade X-7 of SMA N 5 Semarang, researcher found that students were hyperactive along learning activities but not because of the material. It happened when students were divided into some groups that they should be moved to gather with their group. It took so much time and obviously waste the time. In this first meeting, researcher found difficulties in organizing the class. It is challenged the researcher to conduct learning activities with suitable learning model so that can increase students' learning activities.

The learning process essentially aims to develop students' activities and creative abilities through various interactions and learning experiences. According to (Kanza et al., 2020), learning activities emphasize understanding of problems students face in the learning process. The Indonesian Dictionary, active means being active (working or trying) while activities is a thing or situation where students can be active. According to (Iswadi, 2021), activity is both physical and mental activity, specifically doing and thinking as

an inseparable chain. Therefore, student learning activities are an important fundamental factor ensuring the success of the learning process.

Students' learning activities can be observed through their participation in various teaching and learning processes. According to Harmalik (as cited in Widiyanti, 2018), student learning activities have 8 aspects, which are:

1. Visual activities (visual activities), such as reading, observing experiments, demonstrations, exhibitions, and observing others at work or play.

2. Speaking activities (oral activities), such as stating a fact, retelling an event, asking questions, giving suggestions, expressing opinions, interviewing, discussing and interrupting.

3. Listening activities, such as listening to descriptions, conversations, discussions, music, speeches, etc.

4. Writing activities (writing activities), such as writing essays, reports, tests, questionnaires, articles, etc. Drawing activities such as drawing, creating graphs, maps, diagrams, models, etc.

5. Motor activities (motor activities), such as performing experiments, building structures, playing with models, gardening, caring for animals, etc.

6. Mental activities (mental activities), such as thinking, remembering, solving problems, analyzing, seeing relationships, making decisions, etc.

7. Emotional activities (emotional activities), such as enjoying, feeling bored, happy, courageous, calm, nervous, etc.

Students' learning activities related with Merdeka curriculum in Indonesia can be transformed into Pancasila student profile. The Pancasila student profile is made up of a variety of skills formed along six key dimensions. Six of them are interrelated and underpin the effort to achieve a complete Pancasila student profile, which requires the simultaneous development of all these aspects. The six dimensions are 1) have faith and fear God Almighty, and noble character; 2) Global diversity; 3) Work together; 4) Independence; 5) Critical thinking; and 6) Creativity (Satria et al., 2022).

As one of learning model which recommended by Kemdikbud (as cited in (Hasanah et al., 2023), Project-based Learning (PjBL) was chosen by the researcher to be implemented in X-7 grade. According to Belwal et al. (as cited in Zen et al., 2022), the PjBL model aims to guide students in collaborative projects that integrate various subjects, which provides opportunities for students to explore content in several meaningful ways for themselves and carry out collaborative experiments.

Kemaloglu-er & Sahin (2022) pointed out Project-based Learning model gives students opportunity to actively participate in the learning process, offer preferences, and demonstrate their interest in the learning environment. Therefore, it has strong potential to make learners more attentive. In English class, when the lesson content is relevant with students' experiences, they become more interested and can have meaningful understanding during learning process as stated by Saenz et al., 2018). As a general rule of thumb, the project can be done during or after learning process is the class which focus on contextual content learning (Kurnely, 2018).

The characteristic of project-based learning allows students to decide which project to complete based on the topic that being discussed in the class (Assyahbana, 2019). Besides, students can implement learning by doing. The teachers' role in PjBL model is as facilitator, advisor, and evaluator. In conclusion, this model promotes students centered learning.

There are six syntaxes of Project-based Learning as stated by George Lucas (as cited in Nurohman, 2007). The first syntax is start with the essential question. This syntax provides learning activities where teacher guides students to the topic being discussed by giving questions. The questions must guide students to create a project. In this step, teacher must ensure that all of the essential material have been done and students can get well understanding.

The second syntax of PjBL is designing a plan for the project. The planning deals both teacher and students to work collaboratively. There are some content should be included during design phase. Teachers should provide information about the role of the project, the materials and tools that can be used when implementing the project, and activities after completing their project. These roles are important to reduce misunderstandings between students and teacher.

Creating a schedule is the third syntax of PjBL. In this phase, teacher and students must arrange their schedules to suit the project the students will be working on, meet the project deadlines, let students know there are no suitable projects, ask students to explore their creativity as they complete the project, and ask them to explain their results. This stage can give the chance to students to be actively involved in learning process with various learning activities.

The next syntax of PjBL is monitoring the students and the progress of the project. As one of the teacher's role, teacher should monitor students' project. It means that teacher as a facilitator for students along with the project process. This can help students if their project runs into difficulties. Teachers can create an assessment grid to more easily see all the activities students do and see each student's abilities and understanding in relation to the material and project.

Assessing the outcome is the fifth syntax of PjBL. During the assessment phase, the teacher explains further or makes accurate statements regarding the project results that is not suitable. In addition, teachers giving feedback in order to know students' understanding of the material. It can help teacher to arrange the strategy for the next meeting.

The last syntax of PjBL is evaluating the experience. At the final stage of the learning process, teacher and students reflect on the activities and results of completed projects. The reflection process is carried out both individually and in groups. At this stage, students are asked to express their feelings and experiences while completing the project. Teacher and students develop discussions in order to improve performance during the learning

process, so that in the end a new finding (new inquiry) is found to answer the problems raised in the first learning step.

The PjBL model is relevant to be conducted in this research to improve students' learning activities through a project in producing a text about historical building. Through a set of PjBL syntax, students get the chance to be organized in learning both individual or in group systematically.

Along with the explanation above, the researcher is intended to improve students' activities through the implementation of project-based learning model in conducting extended text consisting historical recount and descriptive text. This learning activities within PjBL syntax give students chance to explore more about the concept and skill in conducting a project related with relevant situations.

2. METHOD

In designing this study, the researcher used the spiral model of classroom action research proposed by Kemmis & Taggart (as cited in Kharis, 2019), in each cycle including 4 stages: plan, action, observe, and reflect. The following picture is the illustration steps of classroom action research proposed by Kemmis and Taggart.
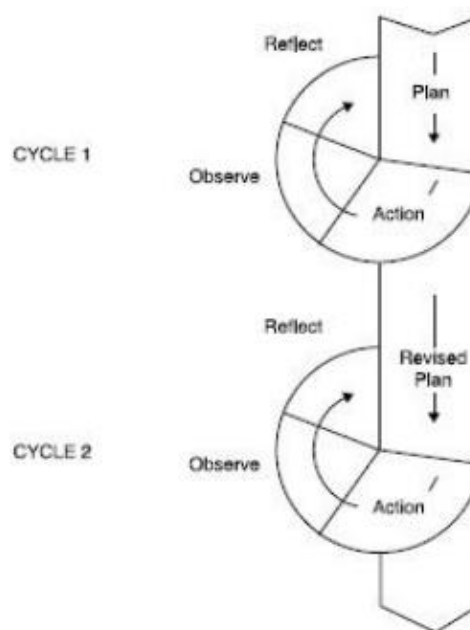

Figure 1. Classroom Action Research Model by Kemmis and Taggart

The steps of the model were designed as follows.
1.   Planning
Before entering the cycle I, pre-cycle was taken from the observation of learning process on grade X-7. In planning the action, there were two cycles conducted in this research. Cycle 1 arranged into two meetings consisting of the first syntax of PjBL that was starting with the essential questions. It was the first step in which the students built their knowledge about historical recount text and descriptive text. The detail learning activities served in first and second meeting of lesson plan that can be seen in the Attachment 1. While the cycle 2 conducted into two meetings consisting of the second to fourth syntax of PjBL. These were designing a plan for the project and creating a schedule for the third meeting, and monitoring the students and the progress of the project for the fourth meeting. The researcher also prepared the research instruments to obtain the research data.
2.   Action and Observation
The researcher conducted the action and observation during learning process within two cycles. It was observed through observation guidelines by giving field notes on the research instruments and

collecting documents including students' worksheets.

3. Reflection

Reflection was used in this research to assess the students' learning activities. The researcher and advisor discussed the learning circumstances concerning the actions. If the actions were carried out successfully, the researcher would continue the action by providing different instruction for students. However, if the actions failed, the researcher and advisor would try to find the suitable actions.

Observation was conducted in this research as the data collection technique. The research data were conducted from pre-cycle to find out the classroom problem during learning activity in which the material was different from the first cycle's material. The collaborator' role was an advisor and observer. As the researcher's *pamong* teacher, she observed the pre-cycle that had been conducted by the researcher. After that, she gave some advice to make improvement for cycle 1 and so on.

During the learning cycles, the researcher conducted observation guidelines as the research instruments. The observation sheets consisted of four elements of students' learning activities including collaboration, independent, creativity, and critical thinking. The indicator of collaboration was when student worked together to find more information related with the material given in their group. While the indicator of independent was when student carried out a brainstorming process at the beginning of learning activities. In the element of creativity, the indicator was when student composed historical recount and descriptive texts in the context of situations in everyday life. For the last element, the indicator of critical thinking was when student could analyze the social function, text structure, and linguistic elements of recount and descriptive text in various contexts in everyday life. The following table was the observation guideline of this research.

Table 1. Observation Guideline

No.	The elements of students' learning activities	The students' attendance number													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14-36
1.	Collaboration Work together to find more information about the material given in the group.														
2.	**Independent** Carry out a brainstorming process at the beginning of learning activities.														
3.	**Creativity** Composing														

	historical recount and descriptive texts in the context of situations in everyday life.														
4.	**Critical Thinking** Analyze the social function, text structure, and linguistic elements of recount and descriptive texts in various contexts in everyday life.														

The criteria of students' learning activities for this research were SD (still developing) when the score was less than 60, AD (already developed) when the score was in the range of 60-75, DAE (developing according to expectations) when the score was in the range of 76-91, and HD (highly developed) when the score was in the range 92-100.

The minimum score for the elements of students' learning activities was DAE (Developing According to Expectation) that the KKM score was 76-91. In order to know the improvement from cycle 1 to cycle 2, the researcher would find the average of students' learning activities in the form of percentage in grade X-7 of SMA N 5 Semarang.

In order to analyze the data, Miles & Huberman (1994) model was used. It consisted of data reduction, data display, and conclusion drawing. The observation guideline focused on elements of students' learning activities as shown in Table 1. The data then analysed by looking at the results of cycle 1 and the next cycle in order to answer the research question. After that, the data were displayed using table containing the research results in the form of percentage. The following is the formula to get the percentage:

$$P = \frac{\Sigma x}{N} \times 100\%$$

P= Total Percentages
Σx = total score that student got
N = total score of students' learning activities.

As the last step of the data analysis, the conclusion drawing was done. The conclusion was the final conclusion with some elaboration relating it with some research theory. As a result, the data which dominantly showed improvement would meet the hypothesis of this research.

3. RESULTS AND DISCUSSION

The class X-7 was decided based on the discussion with pamong teacher as there were some issues regarding students' learning activities during pre-cycle learning. This pre-cycle learning was conducted on July 28, 2023. The following table was the observation results during pre-cycle learning.

The results of the research data analysis regarding students' learning activities on grade X-7 of SMA Negeri 5 Semarang through the observation of the implementation of Project-based Learning model in the cycle 1 and 2 displayed in the Table 2.

Table 2. Research Results

Status	Scoring	Pre-Cycle		Cycle 1		Cycle 2	
		F	%	F	%	F	%
Achieved	>75	12	33,33%	20	55,56%	31	86,11%
Not Achieved Yet	<76	24	66,67%	16	44,44%	5	13,89%
Total		36	100%	36	100%	36	100%

Based on Table 3 above, it can be identified that the comparison of data processing on student learning activities from pre-cycle conditions, cycle I, to cycle II met the improvement. In the initial conditions or during the pre-cycle, data collection was included in the positive category with an active score >75, specifically out of 36 students there were 12 active students, with a 33,33% ratio and up to 24 students showed least active results with a rate 66,67%. While the results of the cycle I indicated an increase in learning activities with the number of students included in the active category up to 20 students with a rate 55,56%, while there was also a decrease in the number of least active students, which were 16 students with a percentage of 44,44%. In cycle II, the results showed an increase in students' learning activities, specifically 31 students achieved the active category, with a total percentage of 86,11% and the number of students belonging to the less active category decreased, specifically 5 students with a total percentage of 13,89%.

Looking at the improvement of the Cycle 1, the researcher and pamong teacher planned the Cycle 2 by providing learning activities through the implementation of third to fifth syntax of PjBL. These were designing a plan for the project, creating a schedule, and monitoring the students and the progress of the project. In the cycle 2, researcher developed the learning activity by deciding project's group to design, plan, and create the historical recount text and descriptive text. The researcher's role was as facilitator, advisor, and motivator during learning process.

The results of cycle 2 in Table 3 indicated that students' learning activities were significantly improved. Students were actively involved in group discussion in order to design the group project in conducting historical recount text and descriptive text. Students were organized to divide each group member's work so that they were able to do their job. This made the group project run systematically and structured. By planning the project, students in group had more time in exploring the material and resources using any tools or media to produce the text being discussed. These activities made students' learning activities in terms of independent, collaboration, creativity, and critical thinking significantly enhanced.

The implementation of the first syntax of Project-based learning model in Classroom Action Research led to increase student learning activities. Based on the research results, students' learning activities significantly improved. The following figure were the representative of students' learning improvement from pre-cycle, cycle 1, and cycle 2.
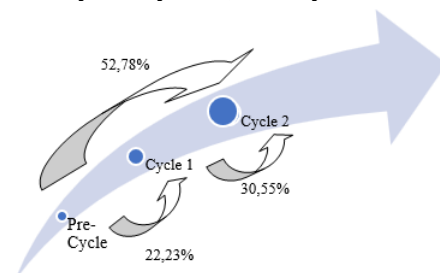
Figure 2. The Improvement of Students' Learning Activities

The Figure 1 showed that the implementation of PjBL could improve students' learning activities in which from pre-cycle to cycle 1 improved in a rate 22,23%, cycle 1 to cycle 2 improved in a rate 30,55%. In the cycle 1, the implementation of the first syntax of PjBL (start with the essential question) enhanced students' learning activities. Students were involved in interactive talking in the beginning of the class by providing some questions before learned the material. It indicated that students' learning activity in term of independent increased. In other elements, students were actively involved in analysing and understanding the text and discussed it with their peer. It indicated that students' collaboration and critical thinking improved. In conclusion, the implementation of the first syntax of PjBL could improve students' learning activities.

The improvement of students' learning activities from Cycle 1 to Cycle 2 indicated that the second to fourth syntax of PjBL absolutely increased students' learning activities. In Cycle 2, students worked together in group collaboratively. This phase gave the chance to student to be actively involved in learning process with various learning activities (George as cited in Nurohman, 2007). In planning and designing project, students could improve students' collaboration, creativity and critical thinking in designing and producing the text, and work independently based on their job in their project group. This was because the lesson content was relevant with students' environment where students lived in that was about historical places in Indonesia. They became more interesting and had meaningful understanding during learning process when the content being studied related with students' experiences (Saenz et al., 2018). In addition, students got the chance to decide the historical places they interested in. Hence, these syntaxes of Project-based learning model gave students opportunity to actively participate in the learning process

(Kemaloglu-er & Sahin, 2022). This research results also ensure the researcher's hypothesis that the implementation of Project-based learning model can improve students' learning activities.

4. CONCLUSION

This research objective is to explain the implementation of Project-based Learning model in grade X-7 of SMA Negeri 5 Semarang in improving learning activities. The research results discover that the implementation of each syntax of PjBL by giving contextual material related with students' environment significantly improved students' learning activities in a rate 52,78% of improvement from pre-cycle learning. These stages can be set within peer assignment for the first syntax and group discussion for the second, third, and fourth syntax of PjBL.

The implementation of PjBL syntax absolutely can improve students' learning activities. It can be consideration for teacher in creating learning activities to make students actively involved during learning process. However, because of the time limitation of this research, the researcher only used only observation guidelines as data collection technique. The further research can use varied data collection technique such as interview to get students' view about the implementation of PjBL model.

BIBLIOGRAPHY

Assyahbana, G. M. (2019). The Implementation of Project-Based Learning through Poster in Teaching Writing The Implementation of Project-Based Learning through Poster in Teaching Writing Narrative Text for Senior High School. *RETAIN*, *7*(3), 83–92.

Hasanah, A. U., Ambarini, R., & Shiang, G. Y. (2023). AN ANALYSIS OF LEARNING ACTIVITIES FOR PROBLEM-BASED LEARNING IN THE PROCEDURE TEXT LESSON PLAN. *Jurnal Ilmiah Multidisiplin*, *1*(5), 503–513. https://doi.org/10.55681/primer.v1i5.192

Iswadi, H. (2021). Metode Active Learning Upaya Peningkatan Keaktifan dan Hasil Belajar Siswa di Era Pademi Covid-19. *Chalim Journal of Teaching and Learning*, *1*(1), 35–44. https://doi.org/10.31538

Kanza, N. R. F., Lesmono, A. D., & Widodo, H. M. (2020). ANALISIS KEAKTIFAN BELAJAR SISWA MENGGUNAKAN MODEL PROJECT BASED LEARNING DENGAN PENDEKATAN STEM PADA PEMBELAJARAN FISIKA MATERI ELASTISITAS DI KELAS XI MIPA 5 SMA NEGERI 2 JEMBER. *Jurnal Pembelajaran Fisika*, *9*(2), 71–77.

Kemaloglu-er, E., & SAHIN, M. T. (2022). Project-Based Learning in English Language Teaching at a Rural School: A Case Study from Turkey. *Novitas-ROYAL (Research on Youth and Language)*, *16*(1), 34–55.

Kharis, A. (2019). Upaya Peningkatan Keaktifan Siswa Melalui Model Pembelajaran Picture and Picture Berbasis IT pada Tematik. *Mimbar PGSD Undiksha*, *7*(3).

Kurnely, V. (2018). *PROJECT BASED LEARNING IN ENGLISH READING CLASSROOM (A Qualitative Case Study of Two Junior High Schools in Bogor) THESIS*.

Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis. *SAGE Publications*.

Nurohman, S. (2007). *PENDEKATAN PROJECT BASED LEARNING SEBAGAI UPAYA INTERNALISASI SCIENTIFIC METHOD BAGI MAHASISWA CALON GURU FISIKA*.

Saenz, F. B., Florez, K., Acevedo, M. R., & Suarez, S. T. (2018). Implementing a community-based project in an EFL rural classroom. *Colombian Applied Linguistics Journal*, *20*(2), 231–248. https://doi.org/10.14483/22487085.13008

Satria, R., Adiprima, P., Wulan, K. S., & Harjatanaya, T. Y. (2022). *Panduan Pengembangan Projek Penguatan Profil Pelajar Pancasila*.

Sherly, Dharma, E., & Sihombing, H. B. (2020). MERDEKA BELAJAR: KAJIAN LITERATUR. *Konferensi Nasional Pendidikan I*.

Suharto, V. T., Waraulia, A. M., & Hermayani, T. (2020). The implementation of innovative learning models and based hots scientific approach on lesson plan of Indonesian language at schools. *Journal of Physics: Conference Series*, *1464*(1). https://doi.org/10.1088/1742-6596/1464/1/012023

Tricahyati, S., & Zaim, M. (2023). English Teachers' Readiness in Implementing of "Merdeka Belajar" Curriculum in Teaching English at Junior High School in Padang. *Journal of English Language Teaching*, *12*(1), 97–105. https://doi.org/10.24036/jelt.v12i1.1 21783

Widiyanti, K. (2018). PENINGKATAN KEAKTIFAN DAN HASIL BELAJAR MATERI CAHAYA DAN ALAT OPTIK MELALUI PEMBELAJARAN INKUIRI TERBIMBING PADA PESERTA DIDIK KELAS VIII C SEMESTER 2 SMP NEGERI 1 UNGARAN. *Jurnal Kreatif*, *9*(1), 40.

Yunita, L., & Widodo, H. (2023). THE IMPLEMENTATION OF MERDEKA CURRICULUM IN ISLAMIC EDUCATION LEARNING AT SMK MUHAMMADIYAH LUMAJANG. *Jurnal Pendidikan Islam*, *12*(1), 103–112. https://doi.org/10.29313/tjpi.v12i1.11 287

Zen, Z., Reflianto, Syamsuar, & Ariani, F. (2022). Academic achievement: the effect of project-based online learning method and student engagement. *Heliyon*, *8*(11). https://doi.org/10.1016/j.heliyon.202 2.e11509