

ENVIRONMENTAL PROBLEM BASED LEARNING IN TEACHING ENGLISH PARAGRAPH WRITING FOR UNDERGRADUATE STUDENTS

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Abstract

Providing environmental learning material in English language teaching can promote environment awareness. This article reports the implementation of environmental problem-based learning in teaching writing skill on the first-year students of English Language Education of a private university in Tangerang. The total number of the students is 25, and the research was done by using qualitative method namely explanatory case study. The data were collected through observation, test, and interview. Then it was analyzed through three steps namely data reduction, data presentation, and conclusion. The data was to answer the research questions as follow: (1) How is the implementation of environmental PBL in teaching writing?; (2) How is the writing skill of the first year students of English Language Education after being taught by using environmental problem-based learning?; and (3) How is the environmental awareness of the first year students of English Language Education? The result of the research reveals three major findings: (1) description of the implementation of environmental problem-based learning in teaching writing; (2) the description of students' writing skill after being taught by using environmental problem-based learning; and (3) the description of students' environmental awareness. Based on the research findings, it can be summarized that the implementation of environmental problem-based learning to the first-year students of undergraduate school can be used as an alternative method in the teaching writing skill in order to simultaneously develop students' writing skill and foster their environmental awareness. Therefore, it is recommended for ELT teachers to apply the teaching method in teaching and learning process.

Keywords: *environmental awareness; environment-based education; problem based learning; writing skill*

INTRODUCTION

Writing is essentially an act of expressing, developing, and organizing thoughts into written form. The better the writing product, the more ideas the writers have. It is, however, difficult to communicate, develop, and organize ideas in written form (Abbas & Herdi, 2018). Due to the complexity, writing skill is considered difficult by many students, not to mention for the first year students majoring in English Language Education of a private university in Tangerang.

The first problem is they have to think hard to develop and organize the writing ideas. It is challenging not just to come up with and organize thoughts, but also to turn them into understandable language. Based on the analysis on texts produced by the students, it is also found that they are not aware of using appropriate punctuation as well as capitalization. Moreover, the

vocabulary they used are not varied enough. Besides, they were not interested in doing writing process. They prefer directly writing the final draft to doing the writing process bit by bit.

The process writing falls into some steps, there are four basic writing stages, planning, drafting (writing), revising (redrafting) and editing. Moreover, Richards & Renandya (2010) suggest free variation of writing stages in writing class into planning (pre-writing), drafting, responding, revising, editing, evaluating, and post-writing. In line with Richards & Renandya (2010), Fachrurrazy (2011) mentioned the writing process as pre-writing, drafting, revising, editing, and publishing.

The objective of teaching writing seemed to be a simple thing; that is to help the students become “a good writer”. A good writer here means that students are able to write something with good and appropriate aspects of writing skill, i.e. content, organization, grammar, word choice, and mechanic. Those aspects are as recommended by Boardman and Frydenberg (2002). Moreover, Brown (2015) mentioned the micro and macro skills of writing. They are the ability to use word diction, grammar, and writing mechanics including the use of capital letter, spelling, and punctuation. However, it is actually not an easy task for teachers to help students achieve the learning objectives. The first year students of English Language Education are demanded to be able to implement responsive writing; i.e. to create a logically connected series of two or three paragraphs by connecting sentences into paragraphs. The discourse level is where form-focused attention is most prevalent, with a heavy emphasis on context and meaning. (Brown: 2004).

To achieve the objectives of teaching, teachers need to find various new and innovative strategies. Harmer (2004) suggests that teachers need to concentrate on their students' process of writing, and there are a number of strategies we need to consider: (1) The way we get students to plan; (2) The way we encourage them to draft, reflect, and revise; (3) The way we respond to our students' writing; and (4) The process trap. Problem based learning (PBL) is one of methods recommended by some researchers to teach writing skill.

Savery (2006) stated that Problem Based Learning is a method to apply knowledge and skill to develop a solution from a problem. By using this method, students can practice to cooperate with other people; therefore, they can solve the problem together. According to Kenney (2008), problem based learning is collaboration with other people to solve the problem activity. In addition, according to De Graff & Kolmos (2003), “Problem based learning is an education approach whereby the problem is the starting point of learning process.”

Problem based learning also has similar approach to the other teaching writing strategies in terms of employing students' engagement, such as group investigation and collaborative writing technique. According to Untoro (2016), there is a strong connection between group investigation and learning style on students' analytical exposition writing. In addition, Abbas and Herdi (2018) stated that employing a collaborative writing technique can help students overcome their difficulties in producing argumentative essays. To put it another way, incorporating a collaborative writing technique into the instruction of argumentative essay writing can help students enhance their writing skills. Besides, PBL let students exchange writing ideas which is also done when using dialogue journals technique.

In the implementation of PBL, students will communicate with the group member to get writing ideas. The activity is also found when using dialogue journals technique as a research done by Mukti (2016). He discovered that the means of the five writing features of the experimental group taught using dialogue journals as an additional activity were better than those of the control group taught without dialogue journals. It means that PBL can also help students in writing with good aspects.

Furthermore, the research about the use of PBL also have done by some researchers. Ting, Cheng, and Ting (2021) conducted related research showing that a PBL pedagogy produced significant improvements in learning outcomes. In addition, it refers to Aslan's (2020) study, which indicated that students who took live online classrooms using PBL had higher levels of learning achievement.

Environmental problem is one of problems that must be urgently concerned by all the people in the world. Academics, including higher education students, must be at the frontline to overcome the problems. However, in the beginning of the class, class interview showed that the students of English Language Education have not already shown good level of environmental awareness. Exposing environmental issue in the implementation of PBL must be a good strategy for English teachers to develop students' writing skill as well as to instill their environmental awareness. Moreover, in implementing PBL, it is better to challenge the students to solve the problems around them; that is environmental problem. It happens almost everywhere.

This article describes the answer of the following questions: (1) How is the implementation of environmental PBL in teaching writing?; (2) How is the writing skill of the first year students of English Language Education after being taught by using environmental problem-based learning?; and (3) How is the environmental awareness of the first year students of English Language Education? It is hoped that this article can give information for English teachers about an alternative strategy in teaching writing; i.e. by implementing environmental PBL. Furthermore, it is expected to give practical significance for students and teachers. The teacher can encourage students to write well through some stages which is hoped to develop their writing skill and simultaneously instill their environmental awareness. Previous researches only showed the improvement of students' writing skill after the implementation of PBL, but this research shows that in teaching writing skill, the students are able to develop not only their writing skill but also their environmental awareness by applying environmental PBL. In addition, hopefully future researches can provide more comprehensive explanation regarding environmental education in language teaching and learning.

METHOD

In order to answer the research questions, the researcher employed an exploratory case study which investigates the implementation of environmental problem-based learning in teaching writing to the first-year students majoring in English Language Education of a private university in Tangerang in the academic year 2020/2021. This study qualifies as a case study because it was conducted on a small scale, with only one case, and focused on a single instance of educational experience or practice, rather than being generalized (Creswell, 2008).

The research was done on the second semester students majoring English Language Education of a private university in Tangerang. The total number of them was 41 students. They were those who took a contract on English Paragraph Writing course in the academic year 2020/2021. However, only 25 students from morning class participated in this study. They were selected purposively to ease the researcher in obtaining information from the subjects.

Furthermore, the data were collected through observation, writing test, and interview. The observation was done to answer the question how to apply environmental problem-based learning in teaching English paragraph writing. In addition, the test was used to measure the students' writing skill and to know whether the learning method could help them write good paragraph or not. Finally, the interview was done to know the impact of the teaching method on students' environmental awareness. The interview was done to three of the students.

FINDINGS AND DISCUSSION

The research reveals three major findings: (1) description of the implementation of environmental problem based-learning in teaching writing; (2) the description of students' writing skill after being taught by using environmental problem-based learning; and (3) the description of students' environmental awareness. Based on the research findings, it can be summarized that the implementation of environmental problem-based learning to the first-year students of undergraduate school can be used as an alternative method in the teaching writing skill in order to simultaneously develop students' writing skill and foster their environmental awareness.

1. The Implementation of environmental problem-based learning in teaching writing

This part describes how to implement environmental problem-based learning in teaching writing to the first year students of English Language Education in the academic year 2020/2021. Due to the pandemic, the learning process was done online. The main media used to support the learning process were Google Meet and WhatsApp group for communication. The learning activities were done by adapting the free writing process suggested by Richards and Renandya (2010) and following PBL sessions released by Abdalla & Gaffar, (2011). In summary, the learning stage can be seen in table 1.

Table 1. Teaching Writing through Environmental Problem Based Learning

No.	Writing Stage	PBL Session	Product
1.	Pre-writing (planning)	a. Whole class discussion about the problem b. Group discussion to solve the problem	a. Writing ideas b. Writing outline (optional)
2.	Drafting	a. Writing the first draft individually. b. Sharing the draft with the group and responding to each other's draft.	The first draft
3.	Revising	Revising the first draft by considering the group members' suggestions	The second draft
4.	Editing	Editing the writing draft	Final draft
5.	Post-writing	Showing the final writing product, learning from friends' writing, and giving comment to each other	(optional)

a. Planning (*Pre-writing*)

Any activity in the classroom that encourages students to write is known as pre-writing. The planning activity is designed based on the aims of the first PBL session. The activities should stimulate to problem solving, challenge to use knowledge and experience, practice to collect information from learning problem, identify about knowledge and understanding about learning, and develop the ability to study autonomous and collaboration in learning.

The planning activity started with showing some pictures related environment. The students were encouraged to observe the pictures and tell their opinion about what they saw. Firstly, they saw some pictures of good environment. After that, some pictures of bad environment condition were shown, and the students were asked to compare the good and bad environment. Furthermore, they were asked to ponder for a while about the condition of their surroundings, and wrote what they found on a piece of a paper. Then some students told the class about the idea.

Most students found problems regarding environment damage. From what they said, it is known that generally they know the environment is not in good condition. In this session, the students also discussed about global warming and the existence of clean water. It means that they have awareness about the environment. However, their awareness was still in the level of understanding. Some students have known how to prevent the worse damage, but they have not applied it yet.

After the brainstorming with the whole class, the students were grouped. They made a group of four to discuss more about the issue. They discussed and explored knowledge and experience to problem solving. Every group must have responsibility to find a solution from their problem in group discussion. At the end of the prewriting stage, the students should have ideas to develop a paragraph. It is also suggested for them to start outlining.

b. Drafting

The students begin composing their first draft at this point. However, they are simply concerned with writing fluency and are unconcerned with grammatical precision or the neatness of the copy. They focus more on developing writing ideas. Regarding PBL, the aim

of this session is to share and discuss about what students have done individually. After writing the first draft, they share the draft with the group and respond to each other's draft. Students must be active and cooperate with others to give suggestions on the other members' writing content.

c. **Revising**

When students rewrote, they looked at their writings again using the criticism from the previous step as a guide. They went through what they had written again to assess how well they had conveyed their meanings to the readers. Therefore, they would have a better and more complete writing draft.

d. **Editing**

Students were cleaning up their texts and preparing the final draft for the teacher's evaluation at this stage. They proofread their own or their peers' work for grammar, spelling, punctuation, diction, sentence structure, and the accuracy of supporting textual material such quotations and examples. Peer editing is more suggested in this stage in order to make the students' writing better. It is in line with what Nirmala and Ramalia (2017) said; peer editing brings contribution to enhance students' writing skill.

e. **Post-writing**

Any classroom activity that the instructor and students may accomplish with the completed pieces of writing is referred to as post-writing. This might entail things like publishing, sharing, reading aloud, adapting texts for theatrical performances, or just posting texts on bulletin boards. The instructor can also make use of online media, such as social media or any online educational platform.

2. The description of students' writing skill

This part describes the students' writing score. The data was collected by using writing test in which the students were asked to write a paragraph about the topic discussed initially. Their writings were assessed based on the writing aspects suggested by Boardman & Frydenberg (2002, p.180). Based on the guidance, teachers should score the students' writing on the aspect of content, organization, grammar, word choice, and mechanic. Then the students' scores were categorized based on the achievement level suggested by Harris (1969), which can be seen in table 2.

Furthermore, the detail scores of the students can be seen in table 3. Table 3 shows that 23 of 25 students have achieved good scores. Although there are two students only achieved fair category, 92% of the total students have achieved the learning objective well; 1 excellent student, 5 very good students, and 17 good students.

Based on each aspect, the students' paragraphs were scored by considering the following description. First, the students are able to construct ideas with excellent support. Second, the students are able to organize a paragraph which has coherence and cohesion. Next, they are able to demonstrate control of basic grammar (e.g. tenses, verb forms, noun forms, preposition, articles) and show sophistication of sentence structure with complex and compound sentences. In addition, regarding the word choice aspect, the score is based on the ability to demonstrate sophisticated choice of vocabulary items, correct idiomatic use of vocabulary, and correct word forms. Lastly, the student paragraph is scored based on the mechanic aspect; i.e. has good paragraph format, demonstrates good control over use of capital letters, periods, commas, and semicolons, demonstrates control over spelling, and does not have fragments, comma splices, or run-on sentences. The category of achievement level is determined based on the total score of all aspects.

Table 2. The Category of Achievement Level

Score	Category
91-100	Excellent
81-90	Very Good

71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very Poor

The scores show that PBL give positive impact on students' writing skill. It relates to the research conducted by Aslan (2020) which found students who attended live online classes using PBL had higher levels of learning achievement. Besides, it develops more problem-solving skills and live online class interaction than on students who attended live online classes using teacher-based methods. Ting, Cheng, & Ting (2021) also conducted related research. They obtained results showing that a PBL pedagogy produced significant improvements in learning outcomes in terms of learners' perception of university social responsibility, their capacity to deal with complex and ambiguous structure issues, their ability to put professional knowledge into practice, team-building, and communication skills. The initiative had a positive impact on university students, enabling them to gain greater insight into their social responsibility. In this case, in writing process, PBL is able to help students develop writing ideas. The students in this research also experienced more class interaction through problem-based learning. They interacted with the group to discuss the issue which helped them develop ideas to write a paragraph.

Table 3. Students' Writing Score

Students' Code	Aspects					Total Score	Category
	C	O	G	W	M		
S-1	20	20	20	10	8	78	Good
S-2	20	20	21	10	7	78	Good
S-3	17	16	16	9	7	65	Fair
S-4	20	20	20	11	9	80	Good
S-5	21	21	20	10	8	80	Good
S-6	21	21	19	10	9	80	Good
S-7	21	20	20	10	9	80	Good
S-8	20	19	18	10	8	75	Good
S-9	20	20	20	10	8	78	Good
S-10	23	22	20	12	9	86	Very Good
S-11	24	23	23	12	9	91	Excellent
S-12	20	20	20	11	8	79	Good
S-13	20	21	20	10	8	79	Good
S-14	20	20	20	10	7	77	Good
S-15	22	20	21	11	9	83	Very Good
S-16	18	18	18	9	7	70	Fair
S-17	20	19	19	10	7	75	Good
S-18	22	22	19	11	8	82	Very Good
S-19	20	21	19	10	9	79	Good
S-20	21	21	19	12	8	81	Very Good
S-21	19	20	19	11	8	77	Good
S-22	22	21	19	11	9	82	Very Good
S-23	21	20	21	10	7	79	Good
S-24	20	20	18	10	7	75	Good
S-25	20	21	20	10	8	79	Good
Mean	20.48	20.24	19.56	10.4	8.04	78.72	Good

C: Content, O: Organization, G: Grammar, W: Word Choice/ Form, M: Mechanics

3. The description of students' environmental awareness

The implementation of environmental problem-based learning is designed to simultaneously develop students' writing skill as well as their environmental awareness, and it is considered successful for students participated in this study. The previous finding shows the positive impact on writing skill, and this part shows that environmental problem-based learning can instill students' environmental awareness. After the learning process, they understand more about how to keep the environment.

Furthermore, three students were interviewed to know the improvement of their environmental awareness. Some questions let the students to reflect on their roles in keeping the environment. Reflection is important to develop the awareness as what McGibbon and Belle (2015), "Reflective practice enables students to become more aware and empowered through exposure to real-world problems. The students' answers revealed that they would do the real act of keeping the environment. They become more aware of 3R, reuse, reduce, and recycle. It is hoped that they will do what they explained about how to keep the environment. This study has not proven that the students will do the real act, but their awareness is supposed to bring big impacts to the existence of better environment. The environmental awareness does not directly affect the students' writing skill, but it helped students develop ideas which adhered to assignment. It is because the environmental issue is something which is very close to them. The study on this should be conducted deeper.

Considering the fact that environmental problem-based learning can instill students' environmental awareness, it is suggested for educators to integrate the learning materials with environment education. It goes without saying that the more people aware of the environment, the better environment will be. In line with this, Basri, Zain, Jaafar, Basri, & Suja (2012) conducted research which is concluded that the PBL approach is able to enhance the level of environmental awareness among civil engineering students.

CONCLUSIONS

Problem based learning can help students of English Language Education develop their writing skill since it helps students develop the writing ideas. The scores of students' writing also indicate that most of students obtain scores in the category good. Furthermore, environmental problem-based learning can instill the students' environmental awareness although it has not proven that they do the real action. Therefore, it is suggested for teachers to provide environmental issue in developing learning materials. In addition, future research is expected to provide more comprehensive explanation regarding environment education in language teaching and learning. They can conduct researches on similar topic with different research designs. It is also suggested to do research and development (R&D) about teaching models by integrating the environmental issues, not only in teaching writing skill but also other language skills; i.e. listening, speaking, and reading.

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