Conference Paper

Using Environmental Learning Models to Increase the Students' Productive Skills

[1] Siti Oriza Salsijanti [*], [2] Suyadi, [3] Esti Junining, [4] Wike

[1] Doctoral Program of Environmental Study, Brawijaya University, Malang, Indonesia
[2] Department of Animal Husbandry, Faculty of Animal Husbandry, Brawijaya University, Malang, Indonesia
[3] Department of Language and Literatures, Faculty of Cultural Studies, Brawijaya University, Malang, Indonesia
[4] Women' Studies Graduate Program, Brawijaya University, Malang, Indonesia

Abstract

It is found that most of the students in Senior high school do not have adequate awareness of the environment and also find writing difficult. They are also not able to properly communicate in English. To overcome these problems, some learning models were used to teach environmental education as a tool to construct their knowledge. The study investigated the integrating environmental education into the PBL and PjBL methods in learning English. Quasi-experimental design, non-randomized control group, and pretest- posttest were used in the study. The subjects of the study were taken from the population of the XI grade students of SMAN 1 Gambiran, Banyuwangi, Indonesia in 2018/2019. The result of the Mann-Whitney U-Test can be shown that students taught using PBL and PjBL through scaffolds and a campaign achieve significantly higher scores in writing and speaking compared to those taught using the conventional method.

Keywords: environmental learning models, increase, productive skills

Introduction

It is believed that environmental education is an important role in meeting 21st century needs and is crucial in helping children and teenagers to acquire knowledge. This type of education solves environmental problems by providing appropriate information relevant to the needs of the community, thus, future generations relish the benefits of our natural heritage. To achieve this, adequate school involvement is required. The role of the school here is to increase the students' environmental awareness which is urgently needed. The achievement of the implementation of the intended school program should help students to develop knowledge, attitudes, and skills that are important for the obligation of environmentally responsible behavior (Cicera & Krajhanzl, 2013). Furthermore, the school system has its role to play in encoraging environmental care, and education is the perfect institution for increasing environmental awareness as well as sharpening it as a skill (Palmer & Neal, 1994; Cruz & Tantengco, 2017). As the writer is an English teacher, environmental education was implemented in the English subject.

In terms of the teaching and learning process, there are four skills that should be taught in English as a subject. One category is receptive skills which consist of listening and reading, and another is productive skills –which comprises speaking and writing. Receptive skills refer to the ability of students to receive the language and decode the meaning to understand the message. Productive skills refer to

students using the language that they have acquired to produce a message through speech or written text that they want to effectively communicate to the audience. These four skills should be taught in an integrated manner. However, it is clear that many students find writing difficult because they are required to write on their own without any interactive response or feedback from peers or from the teacher. This issue is worsened by the fact that teachers do not give adequate time for writing activities compared to activities related to the three other language skills (Byme, 1992). There are four reasons why teachers would be reluctant to teach writing. The first is the size of the class, a large class makes the teaching of writing difficult. The second is the teacher may not have enough time to teach writing since it is time-consuming. The third reason is teachers often underestimate the writing abilities of students, especially beginners. The last reason is teachers' lack of confidence in their own writing ability. They wonder how they teach writing well if they do not possess good writing abilities themselves. Because of these reasons, many teachers choose to neglect writing skills when teaching English, instead of finding effective ways to solve these problems (Crandall, 2006; Yangrifqi, 2008).

This condition is strengthened by the result of ETA (English Teacher Association) monthly meetings in Banyuwangi. Most of the teachers outrightly said that they rarely teach their students writing because of the belief that writing is not beneficial for the students to pass the national examination (UN). Thus, they place more focus on reading and mastering vocabulary. In line with the teachers'reluctance, the duration of the English lesson in the 2013 curriculum is only 2 hours per week, compared to the 2004 curriculum, which was 4 hours per week for the English lesson, while the subject matter (basic competency) to be taught were so many. This reduction in lesson time gives teachers a very short amount of time to teach writing even though it is time-consuming. Based on the writer's observation, most of the students in the senior high school are barely able to use English for communicative objectives. When the students already have a certain idea in their mind, they get stuck and cannot express the idea orally. This problem may also exist because the students themselves are reluctant to practice English. This is due to aspects such as 1) inhibition, 2) lack of ideas, 3) low motivation and 4) preference to use of mother tongue (Ur, 1996).

Speaking and writing are considered as productive skills because learners have a set of circumstances to produce the language itself. They implicate producing the language rather than receive it. Productive skills are crucial as they give students the opportunity to practice real-life activities in the classroom. Productive language is the language used to convey information or ideas both in writing and orally (Nunan, 2003). For effective communication, speaking is required and communication is concerned with conveying ideas and opinions, expressing a desire or wish to do something, and negotiating or solving a particular problem (McDonough, Shaw, & Hitomi, 2003).

In order to achieve future goals and overcome the problems described, some learning models must be used to teach environmental education which correlates with the opportunities needed for students to increase their knowledge. This is done through engaging in self-directed inquiry, problem-solving, critical thinking, and reflections in a real-world context. Furthermore, there is an assumption which is anchored on the belief that people becoming more knowledgeable about the environment and its associated issues, will, in turn, increase awareness of the environment and its problems and, thus, be more motivated to act toward the environment in more responsible ways (Falquist, 2008). Furthermore, the students that were more often affected by environmental issues had a better perception of the environmental subject (Aminrad et al., 2013).There are some learning methods such as Problem-based and Project-Based leaning that are considered as constructivist-based learning. The constructivist theory has been one of the latest catchwords in higher education circles in recent years. It not only emphasizes active and collaborative learning but also requires students and teachers to discover and construct knowledge together.

Genre is usually defined as a text type. According to the 2013 Curriculum, there are eight genres that should be taught to senior high school students. These are analytical exposition, descriptive exposition, hortatory exposition, narrative exposition, news items, procedure, recount, and report. In general, the term exposition refers to a genre whose social purpose is to argue (or persuade) a case or go against a particular

point of view or position. Hortatory exposition is a text type whose purpose is to persuade readers that something should or should not be the case (Depdiknas, 2013). This means that a writer is using hortatory exposition when he/she wants to persuade readers to do something concerning a particular case. The generic structure of hortatory exposition consists of the thesis, argument, and recommendation. The thesis is comprised of the announcement of the issue concerned as well as the writer's position. The argument consists of the point and elaboration, and the point is used to restate the main argument in the thesis. The writer gives elaboration by developing and supporting eachpoint/argument. For the recommendation aspect, the writer gives recommendations about what should or should not be done. To make it easier for a writer to write a hortatory exposition, he/she needs an exposition scaffold which is a scheme formed by three steps. The steps for constructing an exposition scaffold are 1) An introductory statement 2) A series of arguments to convince the audience and 3) Recommendations about what should or should not to be done (Anderson & Anderson, 1997).

The objectives of the study therefore are to identify, explain, measure and analyze the effect of problem-based learning on the students' writing skills and the effect of project-based learning on the students' speaking skills. Furthermore, to determine that the students have achieved the objectives of the study, the target of the students' learning achievement is presented as follows 1) 70 % of the students' writing scores reach above 75 on a 0-100 scale and 2) 70 % of the students' speaking scores reach above 75 on a 0-100 scale.

Research Method

This study used quasi-experimental design, non-randomized control group, and pretest-posttest. The aim was to identify the influence of learning models: problem-based learning and project-based learning in the experimental group, compared to the control group that used conventional teaching techniques on students' productive skills.

Study Site

The population of this study comprises the eleventh-grade students in the Math and Science program of SMAN 1 Gambiran, Banyuwangi, Indonesia in the first semester of the academic year 2018/2019. The researcher selected this school and the Math and Science program for certain reasons: 1) SMAN 1 Gambiran is one of the schools that need attention mainly because of their volleyball achievement and the lack of concern for the environment, 2)The appropriate genres for teaching environmental awareness are hortatory exposition and analytical exposition, both of which are taught in class XI, 3) This study utilizes Problem-based learning and project-based learning models. On the application of problem-based learning, students are assigned to look for pollution problems (water, land or air) in their village. The problem of pollution is closer to the math and science program since it deals with biology and chemistry subjects. On the application of project-based learning, students were assigned to do a campaign in X and XII grade classes. The campaign's topic was reducing plastic wastes in school.

Data Collection

The data sources in this study are, first, the subjects of the study which consists of the second year students of class XI MIPA 1 and XI MIPA 4 as the experimental group, and class XI MIPA 2 and 3 students as the control group in SMAN 1 Gambiran, Banyuwangi. The selected students also serve as the respondents of this study. Documents in the form of pretest and posttest, questionnaires for the students, an observation checklist and field notes serve as the second data source.

Data Analysis

This study used the Mann-Whitney U-test since the data were abnormally distributed. In other words, the results of the research data or the outlier data on the writing and speaking tests were abnormal data. For practicality, SPSS 13.0 was used. When dealing with data analysis to measure students' productive skills, the value of N-Gain is used for 2 aspects, namely, Writing Aspects and Speaking Aspects, where indicators on the Writing aspects are Content, Organization, Vocabulary, Writing Grammar, and Mechanics. While indicators on the Speaking Aspects are Fluency, Content, Speaking Grammar and Diction.

Result and Discussion

The Result of the Posttest of The Experimental and Control Group

After giving different treatment to both groups, posttest was administered to obtain the data relating to the writing and speaking abilities of students. The treatment given to the experimental group was the teaching of writing using scaffold and speaking using a campaign, while to the control group, it was both teaching writing and speaking using the conventional method. The result of the pretest and posttest of both the experimental and the control groups can be seen in tables 1 and 2.

Table 1. The summary of pretest

Data Groups	X_{Min}	X_{Max}	Average	SD	n
Control Pretest	36	73.5	53.61	8.58	66
Experimental Pretest	38	84	55.97	8.43	68

From the table, it can be seen that the Pretest Control data group obtained a minimum score of 36 and a maximum score of 73.5, where the average score was 53.61 with a standard deviation (SD) = 8.58, whereas, in the data group, Pretest Experiments obtained a minimum score of 38 and a maximum score of 84, where the average score was 55.97 with a standard deviation (SD) = 8.43.

Looking at the average differences, the groups were not too different in their ability. It indicated that they were equivalence before the experiment or treatment. The pretest data showed the students'writing ability in both groups showed that they had weaknesses in writing Hortatory Exposition texts. Both of the students in control and experiment groups got the minimum score. They got the lowest score because instead of writing hortatory exposition text the students wrote the other kinds of text type. Only 3 students who reached the average score for content. In term of organization, only 2 students could reach the average score. There were 4 students who reached highest score for grammar and 41(30%) students in level 3. For vocabulary, there were 46% students reached level 3 score, and for mechanics term, only 51 % students could reach level 3 score. The highest score for content and organization were 27-30 and none of the students could reach the score.

In term of content, the student writing is considered to be poor if it is in level 1 (16-13), means that the text has limited number of ideas which are relevant to the topic, the sentences contain very limited supporting details related to the main idea. Level 2 (21-17) means fair if some ideas are relevant to the topic, the sentences contain few supporting details to the main idea. A hortatory exposition is good or in level 3 (26-22) if most of the ideas in the sentences are relevant to the topic, the sentences contain some supporting details to the main idea. Level 4 (30-27) means very good if the text has already all ideas in the sentences are relevant to the topic, the sentences contain a lot of supporting details to the main idea.

The result of the pretest showed most of the students content writing had limited number of ideas which were relevant to the topic. The sentences in students' writing also contained very limited supporting details related to the main idea. The students specifically said that they did not have any idea to develop their content and to write in good grammatical the text.

Dealing with organization, the student writing is considered to be poor if it is in level 1 (16-13), means that the composition text contains incomplete generic structure of hortatory exposition text (either thesis, one argument or recommendation), ideas are put correctly based on the generic structure. Level 2 (21-17) means the composition contains less generic structures of hortatory exposition text (thesis,two kinds of argument, and recommendation), all ideas in the sentences are put correctly based on the generic structure. A hortatory exposition is good in level 3 if the composition contains complete generic structures of hortatory exposition text (a thesis, three kinds of argument, and recommendation) but not all ideas in the sentences are put correctly based on the generic structure. Level 4 means the composition contains complete generic structures of hortatory exposition text (a thesis, three kinds of argument, and recommendation), and all ideas in the sentences are put correctly based on the generic structure. The result of the pretest showed that only 2 students cold reach the level 3 or good in organization. Most of the students' writing composition were incomplete in generic structure of hortatory exposition text. They got the lowest score because instead of writing hortatory exposition text the students wrote the other kinds of text type.

For the vocabulary aspect, a hortatory exposition text is considered to be poor if it is in level 1(9-7), means the text has very limited range of vocabulary, dominated by inappropriate diction, the intended meaning cannot be understood at all. This text is good or in level 2 (13-10) if the text has limited range of vocabulary and frequent inappropriate dictions, the intended meaning is hardly understood. Level 3 means there is enough range of vocabulary and occasional in appropriate dictions, but the intended meaning is understandable enough. Level 4 (10-9) means the text has wide range of vocabulary and appropriate dictions, the intended meaning is fully understandable.

Dealing with grammar, a hortatory exposition text is considered to be poor if it is in level 1 (9-7), means the text is dominated by grammatical errors and agreement, tense and pronoun. Level 2 (13-10) means Frequents grammatical errors in agreement, tense, and pronoun. A hortatory exposition text is good or in level 3 (17-14) if there are several grammatical errors in agreement, tense, and pronoun, then the text is in level 4 (20-18), if it has few grammatical errors in agreement, tense, and pronoun.

In term of mechanics, the student writing is considered to be poor if it is in level 1 (2-1), means it is dominated by errors in punctuation, capitalization, and spelling. Level 2 (5-3), means there is frequent errors in punctuation, capitalization, and spelling. Level 3 (8-6), means the student writing has several errors in punctuation, capitalization, and spelling. The student writing is very good or in level 4 (10-9), if there are only few errors in punctuation, capitalization, and spelling in the student writing.

The result of pretest showed that 30%, 46% and 51% students were in level 3 in grammar, vocabulary, and mechanics. In fact , the students had enough range of vocabularies and occasional in appropriate dictions, but sometimes they made some grammatical error in tenses, agreement and pronoun. They also had several errors in punctuation, capitalization and spelling.
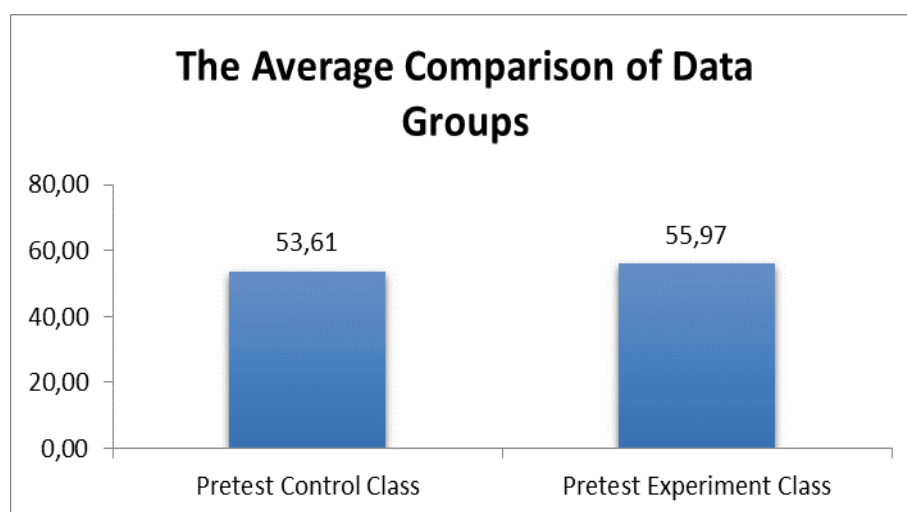
Figure 1. The average comparison of data groups

Based on the Average Comparison Chart above, it is evident that at the time before the administration of treatment (Pretest), the mean values of the two groups of data do not have a relatively significant difference.

Table 2. The summary of posttest

Data Groups	X_{Min}	X_{Max}	Average	SD	n
Control Posttest	46	85	74.53	7.17	66
Experimental Posttest	65	90	79.87	4.14	68

The table shows that the Postest in Control groups had a minimum score of 46 and a maximum score of 85, where the average score was 74.53 with a standard deviation (SD) = 7.17, while in the Postest Experiment groups, the data obtained a minimum score of 65 and a maximum score of 90, where the average score was 79.87 with a standard deviation (SD) = 4.14.
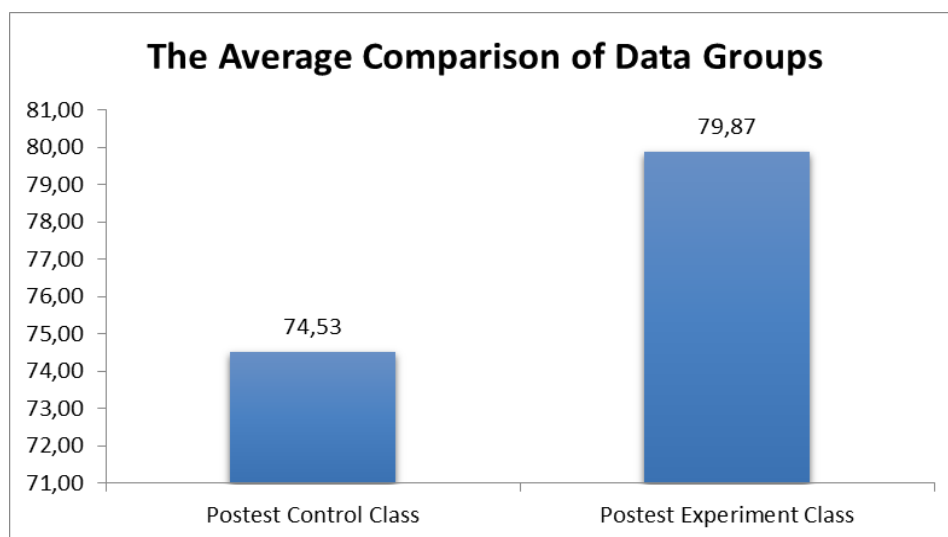

Figure 1. The average comparison of data groups

The Average Comparison Chart above indicates that after the students were given the treatment (Posttest), the two groups' data had many different mean scores, where the posttest Experimental class scores were higher than the Postest Control Class scores.

Comparison Test (Quasi-Experimental Design)

- *Normality Test*

School that made a policy to create a forest zone, by planting trees around the boarding school to protect the surrounding environment.

Table 3 The normality test results of experiment class and control class pretest scores

Class	*p-value*	*Alpha*	Conclusion
Experiment Class	0,072	0,05	Data is normally distributed
Control Class	0,200	0,05	Data is normally distributed

From the table 3.3, there is evidence that at a significance level α = 0.05 and a sample size of 8, p-values of 0.072 for the Experimental Class and 0.200 for the Control Class were obtained. It turns out that the p-value for the two groups of data is greater than alpha. This shows that the data on the pretest class and control class pretest scores are normally distributed.

Table 4 The Normality Test Results of Experiment Class and Control Class Posttest Scores

Class	**p-value**	**Alpha**	**Conclusion**
Experiment Class	0,082	0,05	Data is normally distributed
Control Class	0,000	0,05	Data is not normally distributed

The results presented in the table 3.4 show that at a significance level α = 0.05 and a sample size of 8, the *p-value* was 0.082 for the Experimental Class and 0,000 for the Control Class. Also, the *p-value* of one group of data was smaller than alpha, which is, in the Postest Control class. This is an indication that the control class posttest score data were not normally distributed.

Based on all the results of the normality data testing, it was discovered that there were violations of the assumptions of parametric statistical testing. Therefore, an alternative test was used, namely the Mann-Whitney U-test. Thus, the comparative test used was the non-parametric statistical testing method. The test used the SPSS version 13.0 program application and the output results are as follows:

Table 5. *Mann-Whitney U-* Statistical hypothesis test

Test	*Group Comparison*	*Total Ranking*	*Mann-Whitney*	*P-value*	*Explanation*
Pre-test	Experiment Class	4992,5	1841,5	0,073	Non Significant
	Control Class	4052,5			
Post-test	Experiment Class	5905	929	0,000	Significant
	Control Class	3140			

Statistical Hypothesis:
H_0: Both data groups tend to be the same (non significantly different)
H_1: Both groups of data tend not to be the same (significantly different)
α: 5%
Test criteria:
Reject H_0 if *p-value* < α
Accept H_0 if *p-value* > α

The Pretest data testing of the Experimental Class group acquired a total ranking of 4992.5 and the Pretest data in the Control Class group obtained a total ranking of 4052.5. This resulted in a Mann-Whitney U-Test value of 1841.5 and a *p-value* of 0.073. Because the *p-value* > α (0.073 > 0.050), the statistical hypothesis stated to accept H_0, which means that there is a non-significant difference between the groups of the Experimental Class data and the Control Class data group in the Pretest test.

The Posttest data testing of the Experimental Class group obtained a total ranking number of 5905 while the Postest data in the Control Class group obtained a total ranking number of 3140. The result was a Mann-Whitney U-Test value of 929 and a *p-value* of 0,000. Due to the *p-value* < α (0,000 < 0,050), the statistical hypothesis stated to reject H_0. Therefore, the applicable hypothesis was H_1, meaning that there is a significant difference between the Experimental Class data group and the Control Class data group in the Post-test.

Overview of English Productive Skills (Writing skill) Variables

The English productive skills variable (writing skill) was measured using 5 indicators; content, organization, vocabulary, grammar, and mechanics. Concerning the writing aspects, as indicated by the major and minor findings, it was revealed that a combination of scaffolds and conferencing is effective in improving students' achievements in writing hortatory exposition texts, especially in terms of content, organization, and grammar. Moreover, the vocabulary aspect of descriptive writing was also significantly higher for the control group. The following is a presentation of the frequency distribution of respondents' responses on the English productive skills variable.

Table 6. Frequency distribution of respondents in content indicators

Indicator	Category	Frequency	Percentage
Content	Decrease	2	2.9
	Stable	5	7.4
	Low	4	5.9
	Average	23	33.8
	High	34	50.0
Total		68	100.0

Based on the table 3.6, the overview of the number of students' writing based on content indicators indicates that the majority (as many as 34 students or 50.0%) were the students in the High category, and the least was 2 students or 2.9% in the Decrease category. In relation to the content aspect of writing, scaffolds are effective in helping the students to develop the content of their arguments. Nihayah (2009) stated that the questions in the scaffolds were helpful for the students in generating ideas and made the text that they wrote more fruitful. Moreover, the feedback given on the revision was comprehensive. The feedback was not only on content but also on the other aspects of writing like grammar, vocabulary, and mechanics. This helped the students to gain more on the content aspects of writing.

Table 7. Frequency distribution of respondents in organization indicators

Indicator	*Category*	*Frequency*	*Percentage*
Organization	Decrease	3	4.4
	Stable	4	5.9
	Low	1	1.5
	Average	13	19.1
	High	47	69.1
	Total	68	100.0

The table 7 gives a description of the number of students based on organization indicators. The majority (as many as 47 or 69.1%) were the students in the High category, while the least was 1 student in the Low category or (1.5%). In terms of organization writing, scaffolds were indeed effective in guiding the construction of students' writing. As was stated previously, a scaffold is a guide for constructing a piece of text. It helps a writer construct texts just like it helps a builder construct a building (Anderson & Anderson, 1997). These scaffolds give a writer the right structure for creating a certain text type.

Table 8 Frequency Distribution of Respondents in *Vocabulary* Indicators

Indicator	Category	Frequency	Percentage
Vocabulary	Decrease	9	13.2
	Stable	3	4.4
	Low	13	19.1
	Average	24	35.3
	High	19	27.9
Total		68	100.0

A description of the number of students based on the vocabulary indicator is given in the above table. The students in the Average category (as many as 24 students or 35.3%) were the majority and the students in the Stable category (3 students or 4.4%) were the least. Dealing with the vocabulary aspect, in the hortatory exposition test, the students in the experimental group gained significantly better achievement than students in the control group. This may be because it is easier for students to deliver their arguments based on the point of views they obtained from the field. When expressing an argument, it is possible for students to use simple sentences with simple argumentative words. In the modeling of the text stage, the students practiced how to answer the questions of the scaffolds based on the model text given to them. This activity plays an important role for the students to add to their vocabulary items because it familiarizes them with particular words used to express their ideas. The vocabulary feedback given to the students during conferencing was in the form of vocabulary in the context of theses, arguments and recommendations. These were integrated with grammar and thus, the students learned how to express their ideas in good grammatical sentences by using the appropriate word/expressions to express their ideas. As a result, the students' gain of the vocabulary aspect in the hortatory exposition test was significantly higher than the control group's.

Table 9. Frequency distribution of respondents in *grammar* indicator

Indicator	Category	Frequency	Percentage
Grammar	Decrease	7	10.3
	Stable	3	4.4
	Low	10	14.7
	Average	23	33.8
	High	25	36.8
Total		68	100.0

Based on the table 9, an outline of the number of students based on grammar indicators can be seen. The majority (as many as 25 students or 36.8%) were the students in the High category and the least was 3 students or 4.4% in the Stable category. For the grammar aspect, answering the guided questions in the scaffolds helped the students to use good grammatical sentences for their writing. This is in line with Irmawati (2011) and Megawati (2011) who stated in their study that the students' progress in terms of their classroom action research grammar was achieved through the use of scaffolds by converting the answers of the guided questions into complete sentences in the right tenses used in the text. Thus, it helped them to make good grammatical sentences more easily.

Table 10. Frequency distribution of respondents in *mechanics* indicator

Indicator	Category	Frequency	Percentage
Mechanics	Decrease	10	14.7
	Stable	1	1.5
	Low	19	27.9
	Average	16	23.5
	High	22	32.4
Total		68	100.0

The table above represents the number of students based on mechanics indicators. The majority comprised students in the High category (as many as 22 students or 32.4%) and the least was 1 student in the Stable category or (1.5%).

The mean scores of the content and organization aspects of the hortatory exposition writing test in the experimental group were significantly higher compared to the control group. Also, the vocabulary aspect of the hortatory exposition test in the experimental group was higher than the control group but it was not significantly different. In other words, the hypotheses of this study worked. This means that using problem-based learning in teaching hortatory exposition writing to the senior high school students was significantly more effective than using the conventional method. The success of the experimental group achieving a better score on the posttest compared to the control group may be caused by several reasons.

Richards and Renandya as cited in (Ratnaningsih, 2016) state that writing is not easy because it is difficult to generate, organize, and translate ideas into readable text. However, scaffolds appear to solve all thesedifficulties. When it comes to generating ideas, the guided questions in the scaffolds help the students to generate ideas and make their writing detailed. In relation to the difficulty in organizing ideas, scaffolds were constructed following the generic structure of a text. Thus, it is easier for the students to organize their writing following this generic structure. This helped the students to organize their writing and give it a good order (Yangrifqi, 2008). Meanwhile, regarding the difficulty in translating ideas into readable text, after answering the guided questions in the scaffolds, the students then convert their

answers into complete sentences for their draft. It makes it easier for them to make correct and readable sentences.

Moreover, after the students finished writing drafts using scaffolds, a group revision was carried out with the teacher which allowed them to receive direct oral feedback from the teacher. The feedback given to the students deals with all aspects of writing, i.e., content, organization, grammar, vocabulary and mechanics. Feedback on all aspects was proven to help the students to write better (Lestari, 2008). The improvement on the students' writing was possible because, during revision, the input that the students received was specifically directed to each aspect of writing in the form of the teacher's oral feedback on their own work. As Chaudron says, the important component in the revision process is the provision of feedback from other readers (Chen, 2010). During revision, students received feedback on the effectiveness of their writing and were required to respond to the teacher's feedback directly before counting their product finished. This would help the students to discover that good writing involves an interaction between their ideas, the expression of the ideas, and their readers' perception and reaction to the expression. By means of feedback which gave students information about the effect of their writing on readers, students developed their skills in effective writing.

Regarding organization writing, scaffolds were indeed effective in guiding the students in construction. As stated previously, Anderson and Anderson describe a scaffold as a guide for constructing a piece of text (Anderson & Anderson, 1997). It helps a writer construct just like a builder uses scaffolds when constructing a building. These scaffolds give a writer the right structure for creating a certain text type. Besides scaffolds, conferencing also contributes to helping the students write more well-organized essays. This was likely to happen because during the conferencing, feedback given to the student writers was not only on minor aspects of writing, such as grammar, vocabulary, and mechanics but also on major aspects, i.e., content and organization. Since the teacher acts as "the real audience" of the students' writing, who gives not only written feedback but also interactive feedback, better organization was achieved by the students during conferences. The participation of teachers as correctors during revision also contributes to the improvement of student writing in the organization aspect (Chen, 2010).

In this study, it is found that among all the aspects of writing, mechanics and grammar are the aspects that did not improve significantly higher in the tests in the control group. The reason why the students' gain scores were not significantly higher might be due to the fact that when tested, they were more concentrated on the other more important aspects in writing, such as content and organization, than on the mechanical and grammar aspects which were considered less important.

The reason for such condition is that the checking of the correct usage of mechanics is usually done in the last part of the writing process which is editing. It is possible that the students had inadequate time to edit their essays during the test. As a result, during the treatment, the aspect of mechanics was not neglected but their achievement for this aspect was not very encouraging. This is in line with the monitor hypothesis proposed by Krashen (1982) which reported that in the acquisition process, the monitor will work if the learners focus on form, have knowledge of the rules, and enough time (Lightbown & Spada, 2001). In the case of the experimental group in this study, the students might not have had enough time for the monitor to work on the mechanics aspect as they were busier with others which were more important. In terms of grammar, it was not easy for the students to master all its components needed for good writing. The students may have a good idea of how to make English sentences but find difficulties in learning grammatical structures in the writing process (Alfiyani, 2011).

Overview of English Productive Skills (Speaking skill) Variables

Table 11. Frequency distribution of respondents in *fluency* indicator

Indicator	Category	Frequency	Percentage
Fluency	Decrease	1	1%
	Stable	9	13%
	Low	1	1%
	Average	1	1%
	High	56	82%
Total		68	100.0

The table 2 provides a description of the number of students based on the Fluency indicator. The majority (as many as 56 students or 82%), were students in the High category, while the least was 1 student each or 1.5% in the Average, Low and Decrease categories.

Table 12. Frequency Distribution of Respondents in *Content* Indicator

Indicator	Category	Frequency	Percentage
Content	Decrease	11	16%
	Stable	4	6%
	Low	11	16%
	Average	20	29%
	High	22	32%
Total		68	100.0

Based on the table 3.12, a representation of the number of students based on the Content indicator can be seen. The majority, which consists of 22 students or 32%, were students in the High category, while the least was the Stable category consisting of 4 students or 6%.

Table 13. Frequency distribution of respondents in *grammar* indicator

Indicator	Category	Frequency	Percentage
Speaking Grammar	Decrease	2	3%
	Stable	0	0%
	Low	0	0%
	Average	6	9%
	High	60	88%
Total		68	100.0

Represented in the table 3.33 is an overview of the number of students based on the Speaking Grammar indicator. The majority were in the High category with as many as 60 students or 88% and the least was the Decrease category with 2 students or (3 %).

Table 14. Frequency distribution of respondents in *diction* indicator

Indicator	Category	Frequency	Percentage
Diction	Decrease	1	1%
	Stable	1	1%
	Low	0	0%
	Average	7	10%
	High	59	87%
Total		68	100.0

Table 14 describes the number of students based on the Diction indicator. The Decrease and Stable categories were the least with 1 student each or (1%), and the High category was the majority with up to 59 students (87%).

The mean scores of the fluency, content, grammar and diction aspects of the speaking test in the experimental group were significantly higher compared to the control group. In other words, the hypotheses of this study were applicable. This means that using project-based learning in teaching hortatory exposition speaking to the senior high school students was significantly more effective than using the conventional method. There are several possible reasons for the achievement of a better score on the posttest by the experimental group compared to the control group.

Speaking in public is not an easy task because it is often assumed that mistakes will be made which will result in being directly judged by the audience. The scariest thing is public embarrassment. This fear often arises when people speak in public, due to risking ideas in front of others, threatening credibility, image, and ways of attracting audience attention (Tsaousides, 2017). The fear and anxiety that come with speaking in public can be solved by practicing and rehearsing before presentations or speeches (Raja, 2017). During this, students receive feedback directly from the members of the group. This would enlighten them on the group's ideas about the topic, their punctuality, and the audience's perception and reaction to the theme of the campaign. The students in this study developed their skills in effective speaking.

These explanations may serve as the reasons why implementing Project-based learning through a campaign made the students in the experimental group achieve better in speaking hortatory exposition texts than the students in the control group. Moreover, according to the findings of the questionnaire on the students' opinions, most of the students found that the campaign was beneficial for their speaking ability. The students specifically said that the campaign helped them to develop their fluency and content, organize their ideas, and speak in good grammatical sentences.

Conclusion

From the the discussion on The Effectiveness of Environmental Learning Models on The Students' Productive Skills, the following can be deduced:

1. Problem-Based Environmental Learning is a learning model that expands students' information and awareness about environmental problems around them. This model with scaffold also increases the writing skills of students in hortatory exposition organization, content and vocabulary. It can be shown that students who are taught using PBL through scaffold achieve significantly higher scores in writing hortatory exposition text than those taught using the conventional method.

2. Project-Based Environmental Learning is a learning model that challenges and introduces students to the real problems. It develops students' knowledge and skills about their environment through engaging projects. This learning model increases students' speaking skills in terms of

fluency, content, grammar, and diction. Evidently, students who are taught using PjBL through a campaign achieve significantly higher scores in speaking than those taught using the conventional method.
3. Teaching environmental issues and productive skills through environmental learning models is a new model implemented in the English lesson. Students develop higher-order skills that enable them to apply what they have learned in more meaningful ways.

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