

## **The Use of Problem-Based Learning to Improve Students' Reading Comprehension at the First Grade Students of Senior High School 1 of Middle Halmahera**

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### **Abstract**

This research was conducted to see how the use of PBL could improve the students' reading comprehension, especially the students who participated in this research. Designed as a classroom action research, 21 students in the mentioned school in the title were involved. The researcher was helped by a collaborator handing an observation sheet. This research took two cycles with four stages in each cycle. The result indicated that before the use of PBL as learning model, the participants-students' reading scores were low and some of them were not passed the passing grade. After the use of PBL, the students' scores increased and most of the students passed the passing grade. The researcher also gathered the students' positive responses on the use of PBL in English classroom.

*Keywords: problem based learning, reading comprehension, classroom action research.*

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### **1. Background**

Reading, as one of the language skills, plays important roles as the language input which is undoubtedly important in the process of learning and improving language skill. Having a good learning and training in reading skill supports the students to have good skill in extracting and absorbing information from available sources. Here, the role of reading extends from language input to information input or, simply, knowledge.

Based on the common sense on the roles of reading described above, it is seemed no way to ignore the students' reading skill. The pre-study conducted in the senior high school 1 of Middle Halmahera showed that the students were dealing with reading difficulties. They were facing difficulty in understanding the text they read (given by teacher). The lack of vocabulary and difficulty in comprehending new or unfamiliar words were the main reasons. While the passing grade that the school determined was 62, only 5 of 16 students passed this number; the rests are below the number.

This research is then conducted as an attempt to find suitable learning model to support the students in reaching the passing grade (62). Problem Based Learning (hence PBL) is then chosen as the model to be studied.

PBL has been noticed positively in many places. It is said as an instructional method that is said to provide students with knowledge suitable for problem solving. It is assumed that PBL can be solution to overcome students' reading difficulties if these are considered as problem. More about PBL are described in turn.

## **2. Theoretical Basis**

### ***2.1. Reading Comprehension***

All experts agree that reading comprehension is one of the must-mastered language skills (Tarigan, 2008). Learners with higher reading skill may get better input than the lower ones. This skill has been defined as a complex skill that requires the use of various strategies to activate someone's prior knowledge, monitor understanding, self-question, distinguish between the main idea and supporting details, and summarize (Baker & Brown, 1984).

Reading is a complex cognitive process of decoding symbols in order to build or to derive meaning from the text. Reading, in this term, is a means of language acquisition, of communication, and of sharing information and ideas.

Reading is also a complex interaction between text and the reader which is shaped by the prior knowledge that the readers have, experiences, attitudes, and language community which the readers are socio-culturally situated. In line with this, Snow (2002) mentions that reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language.

In order to reading comprehension takes place, three elements must exist: the reader, the text, and the purposeful activity of reading. These elements, according to Snow, interrelate within a larger sociocultural context. Moreover, the process requires continuous practice, development and refinement in addition, creativity, and critical analysis.

### ***2.2. Some Reading Strategies***

The reading activity can be done alone or assisted by teachers. Reading strategies are tools that the teachers can use to help the students learning to read and comprehend what they are reading. McNamara (2007) mentions that reading strategy is a cognitive behavioral action that is enacted under particular contextual conditions with the goal of improving some aspects of comprehension.

Some reading strategies are:

- a. The identification of reading purpose;
- b. The use of graphic rules and patterns to aid in bottom-up decoding;
- c. The use of efficient silent reading techniques for relatively rapid comprehension;

- d. Skimming;
- e. Scanning.

The strategies mentioned above are usable in the classroom assisted by the teachers. By being assisted, the students can have more chances to comprehend the text they are reading. The students perhaps can read the text alone. However, by using these strategies, the students' reading comprehension could be better.

### **2.3. Problem Based Learning**

PBL is an instructional method that encourages the students to apply critical thinking, problem solving skill and content knowledge to real world problems and issues. Therefore, the instruction in PBL is student-centered.

Rayne & Symon (2005) mention that PBL consists of several components as follows:

- a. Group work: the students work together in small group and provide a framework in which students can test and develop their level of understanding of the material.
- b. Problem Solving: the problems given in a given PBL environment are often daily problems that the students face every time in their life that needs enquiry and critical thinking to solve it.
- c. Discovering new knowledge: in order to find a meaningful solution, student will have to seek new knowledge.
- d. Real world based: the problem to be solved through PBL is the problem in the real life.

PBL, according to Arends (in Apriono, 2014), consists of the following steps:

- a. Orientation: in this step, the teacher conveys learning objectives clearly to the students. Besides, the teacher also needs to set a positive attitude towards learning and explains to the students how PBL is implemented. The problem is introduced in this step and the teacher must make sure that the students are willing to involve in the learning process;
- b. Organization: PBL requires a good collaboration skill. The students are better to be grouped in order to facilitate collaborative interaction among them. The teacher should pay attention towards the classroom and group heterogeneity to avoid social frictions among the students;
- c. Investigation: this is the step or stage where the students start investigating the problem. The teacher can evaluate the students either individually or collectively in

group. It is important that the teacher encourages the students to find available and relevant sources of data and carry out the actual study on the problem until they understand the dimension of the problem;

- d. Presentation: the students are allowed to present the result of the group discussion and to suggest the attempt to solve the given problem. The students are also encouraged to ask questions or to respond questions from their peers in order to develop their own understanding;
- e. Analysis: in this final step, the teacher assists the students to analyze and to evaluate their own thoughts that they have presented.

These steps are believed by many authors, teachers, and researchers who had experienced classroom with PBL as useful steps. If these steps are implemented in well-planned activities, the students' ability to solve the problem may increase.

### 3. Method

This research is conducted as a classroom action research or CAR. CAR is assumed to suit the purpose of this research because this research attempts to find and solve the problem and to increase the system; this is in line with the function of CAR itself as stated by Arikunto (2008) and Sanjaya (2010). This researcher took 21 students from a class (class B) in Senior High School 1 of Middle Halmahera. The students consist of 3 female students and 16 male students. This class is chosen based on the pre-study done where the researcher found that students in this class have lower score in reading comprehension than the other classes. Similar to other CAR, this research is done in cycles (pre-cycle, 1<sup>st</sup>-cycle, 2<sup>nd</sup>-cycle). Each cycle consists of four steps namely: planning, action, observation, and reflection. Each step consists of several to-do items as follows:

- ✓ Planning: in this step, the researcher identified the teaching and learning design including arranging the lesson plan, giving the students fundamental information regarding PBL, and stating the passing grade.
- ✓ Action: in this step, the researcher conducts the teaching process by employing PBL. The classroom begins by explaining the expected learning outcomes, the social function of reading comprehension, dividing the students in groups, giving the groups problem to discuss, and checking the students' progresses.
- ✓ Observation: in this step, the researcher and a collaborator observer observe the classroom activities during the teaching and learning process. An observation checklist is

used to assess the students' learning behavior (i.e. paying attention to the teacher's explanation), classroom interaction, and also teacher's performance.

- ✓ Reflection: in this step, the researcher reflects and reviews the on-going result, discussing it with the classroom and the collaborator observer to determine whether (or not) further cycle is needed.

The instruments used in this research are observation checklist which consists of teacher's observation sheet and students' observation sheet. The test is administered in form of reading text. The students are required to read the text and the researcher gives questions related to the text to be answered by the students. The researcher uses reading rubric to determine the scores of the students reading successfulness. The students' scores are calculated by percentage and then to be compared with the passing grade.

#### 4. Finding and Discussion

In this part, the students' scores in both cycles are displayed. The students' reading scores are about to be compared with the passing grade (62) determined by the school. The scores are displayed in tables and those are the findings which are to be discussed later.

##### *Finding*

Students' scores in 1<sup>st</sup> cycle:

No	Students	Score	Passing Grade	Result
1	Amina Sausan	58,33	62	No
2	Anatasya R.	83,33	62	Pass
3	Ardiansyah M.	66,66	62	Pass
4	Ariani Ahmad	50	62	No
5	Christian	66,66	62	Pass
6	Dian Khofifah	50	62	No
7	Fitri Handayani	75	62	Pass
8	Julisma Hasannudin	83,33	62	Pass
9	Mardiana Husen	58,33	62	No
10	Nona Sazhira	58,33	62	No
11	Nurlaili Mochtar	58,33	62	No
12	Nurul Ahmad	83,33	62	Pass
13	Putri Haritsya	58,33	62	No
14	Rahmati F.K	58,33	62	No
15	Rahmi Puspita Sari	75	62	Pass
16	Remon R.	58,33	62	No
17	Resmita Jamal	50	62	No
18	Risna M.Haris	66,66	62	Pass
19	Siti Nur Kholifah	66,66	62	Pass
20	Yaumul Achir	58,33	62	No

21	Zulaika Zakaria	75	62	Pass
Score Average		64,68		

Students' scores in 2<sup>nd</sup> cycle:

No	Students	Score	Passing Grade	Result
1	Amina Sausan	66,66	62	Pass
2	Anatasya R.	83,33	62	Pass
3	Ardiansyah M.	75	62	Pass
4	Ariani Ahmad	66,66	62	Pass
5	Christian	75	62	Pass
6	Dian Khofifah	66,66	62	Pass
7	Fitri Handayani	83,33	62	Pass
8	Julisma Hasannudin	91,66	62	Pass
9	Mardiana Husen	66,66	62	Pass
10	Nona Sazhira	66,66	62	Pass
11	Nurlaili Mochtar	66,66	62	Pass
12	Nurul Ahmad	91,66	62	Pass
13	Putri Haritsya	66,66	62	Pass
14	Rahmati F.K	66,66	62	Pass
15	Rahmi Puspita Sari	83,33	62	Pass
16	Remon R.	66,66	62	Pass
17	Resmita Jamal	58,33	62	No
18	Risna M.Haris	75	62	Pass
19	Siti Nur Kholifah	75	62	Pass
20	Yaumul Achir	66,66	62	Pass
21	Zulaika Zakaria	91,66	62	Pass
Score Average		73,80		

### Discussion

The tables displayed above contain the result which is symbolized by Pass (stands for *this student passed the passing grade*) and No (stands for *this student does not pass the passing grade*). The result can be seen by using *frequency (f)* which is significantly different from 1<sup>st</sup> to 2<sup>nd</sup> cycle.

In the 1<sup>st</sup> cycle, the *f* of result No is 11 which means that 11 students or 52 % of the students do not pass the passing grade. This is an important number because more than half of the students have scores lower than the passing grade. Whereas, in the 2<sup>nd</sup> cycle, the *f* of result No decreased significantly from 11 to 1 which means that the percentage of the students who do not pass the passing grade decreased from 52% to 5%.

By looking at the mean or average (*x*) of the students' scores, we can see that although the number shows that the class passes the passing grade ( $64,68 > 62$ ) in the 1<sup>st</sup> cycle, the number is

not significant. The difference or gain is only 2 (64-62). However, in the 2<sup>nd</sup> cycle, the score average increases from 64,68 to 73,80 and the gain is 11. This comparison shows that PBL has positive impact to the students' reading comprehension.

Viewed from the other perspective, the researcher invites the reader to look how individual scores are changed from 1<sup>st</sup> to 2<sup>nd</sup> cycle as shown by the table below:

No	Students	1 <sup>st</sup> cycle	2 <sup>nd</sup> cycle	Gain
1	Amina Sausan	58,33	66,66	8,33
2	Anatasya R.	83,33	83,33	0
3	Ardiansyah M.	66,66	75	8,34
4	Ariani Ahmad	50	66,66	16,66
5	Christian	66,66	75	8,34
6	Dian Khofifah	50	66,66	16,66
7	Fitri Handayani	75	83,33	8,33
8	Julisma Hasanudin	83,33	91,66	8,33
9	Mardiana Husen	58,33	66,66	8,33
10	Nona Sazhira	58,33	66,66	8,33
11	Nurlaili Mochtar	58,33	66,66	8,33
12	Nurul Ahmad	83,33	91,66	8,33
13	Putri Haritsya	58,33	66,66	8,33
14	Rahmati F.K	58,33	66,66	8,33
15	Rahmi Puspita Sari	75	83,33	8,33
16	Remon R.	58,33	66,66	8,33
17	Resmita Jamal	50	58,33	8,33
18	Risna M.Haris	66,66	75	8,34
19	Siti Nur Kholifah	66,66	75	8,34
20	Yaumul Achir	58,33	66,66	8,33
21	Zulaika Zakaria	75	91,66	16,66

The table shows that the gain (*G*) achieved by the students are in positive value which means that the students' individual score increased as well. Only one student does not have any gain because the score in 1<sup>st</sup> and 2<sup>nd</sup> cycle are same.

To make it clearer, we can see the difference of the MIN, MAX, and MEDIAN of each cycle which are tabulated below:

Scores	1 <sup>st</sup> cycle	2 <sup>nd</sup> cycle
MIN	50	58,33
MAX	83,33	91,66
MEDIAN	58,33	66,66

It can be seen that the lowest score in the 2<sup>nd</sup> cycle is higher than the score in 1<sup>st</sup> cycle. It also can be seen that the median and the highest score in the 2<sup>nd</sup> cycle are higher than in the score in the 1<sup>st</sup> cycle.

Based on the data showed above, it can be concluded that PBL has increased the students' reading comprehension.

## **5. Conclusion**

The data from the reading rubric have been displayed, compared, and discussed. The observation data has to do with certainty that PBL is implemented as it should be. The analysis revealed that the implementation of PBL has positive impact on the students' reading comprehension. PBL has increased the students' reading scores from collective perspective and individual perspective. This indicates that Problem Based Learning can be considered as an alternative learning model to be implemented in the English Classroom.

The researcher believes that further research concerning this topic is needed to be conducted in the larger sample size.

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