

THE EFFECT OF PROBLEM BASED LEARNING (PBL) AND DIRECT INSTRUCTION METHOD (DIM) ON THE STUDENTS' ACHIEVEMENT IN READING COMPREHENSION AT SMA NEGERI 1 DOLOK PARDAMEAN

EVANANSI MARPAUNG

Universitas Kapuas Sintang, Jalan Oevang Oeray No.92 Sintang

ABSTRACT: This study attempted to find out the effect of PBL and DIM on the Students' Achievement in Reading Comprehension at SMA Negeri 1 Dolok Pardamean. This research applied quantitative method. To analyze the data, the writer found out the mean, standard deviation, validity and reliability of the test. After calculating them, the writer used t-test to know the effect of PBL and DIM on the students' achievement in reading comprehension. The result revealed that there was any effect of PBL and DIM on the students' achievement in reading comprehension that showed from the result: $\mu X > \mu Y$ ($67.07 > 50.47$) and $t_{obs} > t_{table}$ $75.45 > 0.003$, and in DIM $64.90 > 50.47$ and $t_{obs} > t_{table}$ ($60.12 > 0.003$). From the result of analysis, the effect of PBL is more significant than the effect of DIM on the Students' Achievement in Reading Comprehension. So, PBL should be applied in teaching reading comprehension.

Key Words: Problem Based Learning, Direct Instruction Method, Reading, Students

INTRODUCTION

There are four major skills in communicating through language, they are often broadly defined as listening, speaking, reading and writing. All of these language skills are very important to everyone especially for students to become fluent in English. The reading and listening skills are known as input skills, whereas the speaking and writing are output skills.

Huda (1997) stated the specific language skills to be mastered by students are (1) effective reading ability, (2) ability to understand spoken English, (3) writing ability and (4) speaking ability. Thus, the order of language skills are reading, listening, writing, and speaking. One of the steps that learners should be mastered is reading comprehension. This thing puts reading comprehension as the main purpose of foreign language teaching in Indonesia but acquiring and mastering this step seems complex to many learners and they often find it is difficult to exploit this skills in their learning experience. Learning process mostly students are difficult to read and answer the comprehended questions based on the reading text they have read. Mercer (1983: 307) states that reading is felt as one of the central difficulties of students to be able to read for comprehension questions, English teachers need to design or to plan interesting teaching learning activities.

Reading is an essential skill for a student all levels and it has a large portion in teaching and learning. It is supported by Brown (2000: 185) stating that reading is arguably the most essential skill for success in all education contexts and remains a skill of paramount importance as one creates assessment of language ability. Reading is a comprehension skill.

Moreover, the Senior High School Curriculum concentrates on the use of genre. According to Curriculum 2007/2008 the Competency Standard for Senior High School (Depdiknas, 2007 :2) students should be able to comprehend short functional text, dialogue and monologue text in form of Narrative, Recount, News Item, Descriptive, Report, Hortatory Exposition, Analytical Exposition, Explanation, Discussion, Spoof, Anecdote, Procedure, Review. They are not hoped to write a text in a certain genre, but they are expected to be able to comprehend some shorts of text and answer some questions related to the text. Therefore, it is important for the students to master genres, besides language proficiency, because they will be able to understand a reading text by mastering them.

The fact that must be realized is that to be able to access the world's scientific and technological information, English teaching in Indonesia has been started by giving much more a

Based on the explanation on the background of the study before, the objectives of the research are formulated as in the following: 1. to find out the effect of Problem Based Learning on the students' achievement in reading comprehension at SMA Negeri 1 Dolok Pardamean. 2. to find out the effect of Direct Instruction on the students' achievement in reading comprehension at SMA Negeri 1 Dolok Pardamean. 3. to find out whether Problem Based Learning is more significant than Direct Instruction Method on students' reading comprehension at SMA Negeri 1 Dolok Pardamean.

There are four skills in English, they are Reading, Speaking, Listening, and Writing. Concerning with this study, the writer was not intended to examine all of them, but only Reading taught by Problem Based Learning (PBL) and Direct Instruction Method (DIM) and it involved Literal Comprehension (main idea details, cause and effect, vocabulary), Interpretive Comprehension (referents of pronoun/ adverb, omitted words, writer's intention, conclusion), and Critical Comprehension (opinion, statement, accuracy).

There are thirteen genres in English but this study used narrative text which involved Generic structure (Orientation, Complication, resolution) and Lexicogrammatical Features (Focus on specific and usually individualized participants, use on Material Processes, Relational Processes and Mental Processes, use of temporal conjunctions, and temporal circumstances, use of past ten).

The significances of the study can be theoretically and practically. Theoretically, the result of this study can enlarge and enrich the teachers' understanding and Knowledge in teaching reading comprehension. Practically, the result of this study can be used by the researchers as references to conduct a research in teaching field and by teachers as an input in English teaching learning process especially in developing reading skill, also in functioning their suitable strategy or model of teaching so that the students feel fun and motivated while studying. English teachers as a contribution in improving their teaching methods especially in teaching reading comprehension as well as improving their students' ability in reading comprehension.

In this research, the writer presented and defined some terms such following: Reading is an activity in which readers interact with text to reconstruct the message of the author. Narrative is any written English text in which the writer wants to amuse, entertain people, and to deal with actual or vicarious experience in different ways. Problem Based Learning is one teaching method started by giving the problem, identify the problem, analyze the problem and try to find out the solution of the problem with their own words and idea while the teacher is only act as facilitator. The term "Direct Instruction" refers to a rigorously developed, highly scripted method for teaching that is fast-paced and provides constant interaction between students and the teacher.

Based on the theoretical and conceptual framework above, the hypotheses are formulated as: H_0 : There is no effect of Problem Based Learning (PBL) to reading comprehension of grade ten students of SMA Negeri 1 Dolok Pardamean. H_a : There is an effect of Problem Based Learning (PBL) to reading comprehension of grade ten students of SMA Negeri 1 Dolok Pardamean. H_0 : There is no effect of Direct Instruction Method (DIM) to reading comprehension of grade ten students of SMA Negeri 1 Dolok Pardamean. H_a : There is an effect of Direct Instruction Method (DIM) to reading comprehension of grade ten students of SMA Negeri 1 Dolok Pardamean. H_0 : The effect of Problem Based Learning (PBL) is not more significant than the effect of Direct Instruction Method to the students' reading comprehension. H_1 : The effect of Problem Based Learning (PBL) is more significant than the effect of Direct Instruction Method to the students' reading comprehension.

REVIEW OF RELATED LITERATURE

Reading Comprehension

Comprehension means that a hierarchical relationship which is requiring some skills be taught before other and it is also a complex process in which a reader applies various skills and knowledge

almost simultaneously (Carnine, Silbert and Kameenui, 1990:78). It is what is stated by Scarcella (1992:96) in her book. "Comprehension is defined as an interactive relationship or process involving the learners' background and the text (be oral or written)." The learner cannot comprehend anything for which he or she does not have same

kind of existing knowledge structure or schemata. The comprehension process involves, among other things, assimilation, of new knowledge into existing schemata and accommodation of existing schemata to fit new knowledge.

Students' Achievement in Reading Comprehension

An achievement is defined as measurable process of developing skills or knowledge in teaching and learning process. The achievement is reached through a test which is treated directly to classroom lessons, unit or even total curriculum (Brown: 2013). It is important to be done because it is actually the top goal of learning which touches three aspects namely academics, essentials life skills and responsibility to the community.

Levels of Reading Comprehension

Actually, reading comprehension has different level, Quandt, Ivan J. (1977) uttered that there are three level of reading comprehension namely literal comprehension, interpretive comprehension and critical comprehension.

Literal Comprehension

Literal comprehension is the most obvious. Comprehension at this level involves surface meanings. At this level, teacher can ask students to find information and ideas that are explicitly stated in the text. Reading for literal comprehension, which involves acquiring information that is directly stated in a selection, is important in and of it and also a prerequisite for higher level understanding.

Recognizing stated main ideas details, causes, and effects, and sequences is the basis of literal comprehension, and through understanding of vocabulary, sentences meaning, and paragraph meaning is important.

Interpretive Comprehension

Interpretive reading involves reading between the lines or making inference. It is process of driving ideas that are implied rather than directly stated. At his levels, readers go beyond what is said and read for deeper meaning. They must be able to read critically what they have read. Reader need to able to see relationship among ideas, for example ideas go together and also see the implied meanings of these ideas.

Interpretive or reverential comprehension includes inferring main ideas of passages in which

the main ideas are not directly stated, referents of pronouns, referents of adverbs, omitted words, detecting mood, detecting the author's purpose in writing, and drawing conclusions.

Critical Comprehension

Critical reading is evaluating written material-comparing the ideas discovered in the material with known standards drawing conclusions about their accuracy, appropriateness and timelines. The critical reader must be an active reader, questioning, searching for facts, and suspending judgement until he or she considered all the material. Critical reading depends upon literal comprehension and grasping implied ideas is especially important.

Critical comprehension refers to the ability to make judgement about ideas and information a writer offers. Competent reader will measure them against what they already know accepting or rejecting them in whole or part or withholding judgement until confirmation is reached.

At this level, students can be tested on the following way: a) The ability to differentiate between facts and opinion; b) The ability to recognize persuasive statement; c) The ability to judge the accuracy of the information given to the text.

Burns, Roe, and Ross (1984:177) states that is possible to understand materials on the number of different levels. To take in ideas that are directly stated is literal comprehension; to read between the line is interpretive comprehension; to read for evaluation is critical reading. Perhaps because literal comprehension is easiest to attain, teacher have given it a disproportioned amount of attention in the classroom: but students need to achieve higher levels of reading comprehension to become informed and effective citizens.

Narrative Text

Narrative paragraph tells a story or part of a story. It is usually written in chronological order (Cramer [at all], 1984:380). One way to check your writing for clarifies of purpose is to compare what you have written to four categories of prose, one of the categories is narrative. Each of those categories called theoretical modes.

Problem Based Learning

One of the Method of teaching adopted the most to support learner centered such as Problem-Based-Learning started by giving the problem, identify the problem, analyze the problem and try to find out the solution of the problem with their own words and idea while the teacher is only act as facilitator. The teacher designs the problem scenario, giving some clues and related indication of the source of the problem. (Tan. 2003).

The Characteristics of the Problem-Based-Learning

There are some Characteristics of the Problem-Based-Learning. Tan (2003:30) suggests the Characteristics of the Problem-Based-Learning with the following points: Using Problem in the beginning of the teaching – learning process. The problem given in ill-structured of ordinary problem. The problem given asked for multiple perspective, to guide the students get the concept of the subject. This Problem-Based-Learning concern to self-directed learning for students. Using variation of sources of learning process. This Problem-Based-Learning is also combining collaborative and cooperative that guide students to work individually or in group, interact each other and presenting the result.

Direct Instruction

The term “Direct Instruction” refers to a rigorously developed, highly scripted method for teaching that is fast-paced and provides constant interaction between students and the teacher. Direct instruction is used to describe a lesson where the teacher has control. Unfortunately, teacher and students often made a mistake of direct instruction for the only way to teach. Direct instruction is an instructional method from the Transmission paradigm, and is based on the learning theories of behaviorism and developmentaslism. In a direct instruction lesson the teacher usually spends some time lecturing, then the teacher guides. The students through a complex problem, with the problem broken down into simple steps, then the students are given one or many sample problem to accomplish on their own. (Arends, 2004 : 300)

Procedure of Direct Instruction

The followings are the steps of teaching through direct instruction. 1) Teacher explains the lesson material; 2) Teacher gives examples, and complete steps; 3) Teacher provides the opportunity to frequently asked questions; 3)

Teacher gives problem as post test to measure the level of material being taught; 4) Teacher of student together discuss the student’s work; 5) Teacher closes the lesson and gives homework.

METHOD

Research Design

This research used experimental method with factorial design because this research want to compare the two teaching methods such as Problem-Based-Learning and Direct Instruction Method in SMA Negeri 1 Dolok Pardamean because the students’ achievement in reading in this school didn’t get the target well. This research was conducted with experiment with Problem-Based-Learning and Direct Instruction in this school and expected that it will lead the students to good target of reading. A factorial design is one in which two or more variables are manipulated simultaneously in order to study the independent effect of each variable on the dependent variable as well as the effects due to interactions among the several variables (Ari, Donald 1979:255).

In this study, the writer used two groups. The first group was a group which used Problem Based Learning and the second group was one that used Direct Instruction. Two of the groups were given pre-test and post-test with the same items.

The first Group was given pretest, four teaching in two lesson plans by using Problem Based Learning, and posttest. The second Group was given pretest, four teaching in two lesson plans by using Direct Instruction, and posttest. All lesson plans were made with time allocation 2x45 minutes.

Place and Time of Research

This research was done at the tenth grade students of the academic year 2013 / 2014 at SMA Negeri 1 Dolok Pardamean. The time of the research was for 4 weeks, for each week English was taught four hours by the teacher. And each hour consists of 45 minutes.

Population and Sample

Population and sample are two related terms in research. In Encyclopedia of Educational Evaluation Written “A population is a set (collection) of all elements possessing one or more attributes of interest. Arikunto (2006:109-112) stated that sample is a part of the population that is researched. The limitation of population must be known and prescribed clearly and assertively. And sample also beside we must collect the data

correctly, we must also make the sample correctly and follow justified ways in order to make the believable conclusions. Something about the drawing of sample, that if the subject less than one hundred, it is better to make all the subject as the sample but if the subject more than one hundred, just take approximate 10-15 % or 20-25% more.

The population of this study was the students of Grade X of SMA Negeri 1 Dolok Pardamean of the academic year 2013/2014. There were 160 students comprising 4 classes, but after some observations, the researcher selected only 2 classes having most similar characteristic as experimental groups, namely Class X IPA1 as the experimental group with Problem Based Learning and Class X IPA2 as the experimental group with Direct Instruction. The sample is the group on which information is obtained (Fraenkel and Wallen, 2007). The writer has decided 25% of the population as the sample because she thinks that it has been representative enough in order to get the accurate data. In academic year 2013/2014, there were four classes of the grade ten. The sample was chosen random sampling cluster. This technique was chosen because all classes of the grade ten are homogeneity with the same average. The sample was chosen in two classes participated for the class X IPA1 which uses Problem Based Learning, and the class X IPA2 which uses Direct Instruction.

To collect the data, a reading comprehension test was used. The test was answering the questions based on the given text. It was given to measure students' achievement in reading. This study used multiple choice form because multiple choice was the most used form in assessing reading comprehension (Nana, 2009:25). The test was conducted to three groups. The test consisted of pretest and posttest. The pretest was given on the first meeting before

treatments, while the posttest was given on the last meeting.

The instrument for reading test will consist of 40 items, multiple choices test with 5 options. The researcher gave score 1 for the right answers and 0 (zero) for the wrong answers. So, the student who answered an item correctly, the score was 1 and the students who answered all of the items correctly, her/his score was 40. The scores that the students got was processed to get the final scores i.e. the scores in range between 0 -100, by applying the following formula:

$$Score = \frac{\text{obtained score}}{\text{maximum score}} \times 100 \%$$

The technique of collecting data used by the writer was applied by testing the students' reading comprehension in narrative test. To answer the problems of the study, the writer makes pretest to find out the prior knowledge of students. After the try out instrument, the items that were used as research consists of 30 multiple choice items of narrative. Then, post test was given to find out whether there was any difference between the experimental and control group as a result of the treatment in order to know the effect of PBL and DIM to students' reading comprehension in narrative text. The items of the test were same as pre test.

Generally, the research method is done two groups: first experimental group and second is control group. After the research have finished done and then here the steps to be taken in analyzing the data are below: 1) To Determine the average of each group; 2) To calculate the standard deviation of each group; 3) Statistical Hypothesis.

DATA ANALYSIS AND FINDINGS

The data of Student Problem Based Learning (experimental group) has listed the marks of pre-test and post-test of experimental class. It shows that the lowest score of the pre-test is 58 and the highest is 75, while the lowest score in post-test is 67 and the highest is 87. It means that

the ability of the students in post test is more increase than in pre test.

The criteria level of student's ability in experimental group (PBL)

Mean (\bar{x}) = 67.07

Standard Deviation (S) = 5.27

Level Ability	The Criteria
High	$(\bar{x}) + s$ 67.07 + 5.27 72.34
Medium	$(\bar{x}) - s \leftrightarrow (\bar{x}) + s$ 67.07 - 5.27 ↔ 67.07 + 5.27 61.8 ↔ 72.34
Low	$(\bar{x}) - s$ 67.07 - 5.27 61.8

From the criteria level of the students' ability, the writer makes the classification of it. The percentage is calculated from criteria of the students' score. By doing so, the writer will know the effectiveness of

Level Ability	The Criteria
High	$(\bar{x}) + s$ 64.9 + 6.60 70.50
Medium	$(\bar{x}) - s \leftrightarrow (\bar{x}) + s$ 64.9 - 6.60 ↔ 64.9 + 6.60 58.30 ↔ 70.50
Low	$(\bar{x}) - s$ 64.9 - 6.60 58.30

Problem Based Learning in teaching reading comprehension in experimental group.

The criteria level of student's ability in experimental group (Direct Instruction Method)

Mean = 64.9

Standard Deviation (S) = 6.60

From the criteria level of the students' ability, the writer makes the classification of it. The percentage is calculated from criteria of the students' score. By doing so, the writer will know the effectiveness of Direct Instruction method in teaching reading comprehension in experimental group.

Level Ability	The Criteria
High	$(\bar{x}) + s$ 50.47 + 7.27 57.74
Medium	$(\bar{x}) - s \leftrightarrow (\bar{x}) + s$ 50.47 - 7.27 ↔ 50.47 + 7.27 43.30 ↔ 57.74
Low	$(\bar{x}) - s$ 50.47 - 7.27 43.30

The criteria level of student's ability in control group

Mean = 50.47

Standard Deviation (S) = 7.27

The whole students taught by using PBL will get higher reading score than the students taught by using DIM. The average score of students' achievement in reading taught by using PBL is better than taught by using DIM. DIM draws its theoretical support from behavioral psychology and social learning theory. Teacher using DIM rely mainly on external stimuli, such as reinforcement, to maintain students' cooperation and to keep them engaged in academic tasks. The teacher's role in a DIM lesson consists mainly of presenting manner. PBL on the other hand, draws on cognitive psychology for its theoretical support. The focus is not so much on what students are doing (their behavior) but on what they are thinking (their cognitions) while they are doing it. Although the role of a teacher in PBL sometimes involves presenting and explaining things to the students, it is more usually involves serving as a guide and facilitator so that

students learn to think and solve problem on their own. Based on those various teaching methods, it can be concluded that students' achievement in writing taught by PBL is higher than students taught by using DIM.

CONCLUSION

Based on the data analysis and research findings at the previous chapter, some conclusions are derived through meaningful interpretation of the findings in this study and drawn as the following: The use of PBL and DIM methods affect students' reading comprehension. The effect of PBL is more significant than the effect of DIM to students' reading comprehension. The use of PBL and DIM method make teaching and learning process more enjoyable and interesting. It is because of making all students active to take every activity in classroom. The students' achievement is highest in Literal Comprehension rather than Interpretive Comprehension and Critical Comprehension.

REFERENCES

- Ary, Donald. 1979. *Introduction to Reseach*. America : Holt, Rinehart and Winston
- Arend.I .Ricard. 2004. *Learning to Teach* .America : Mc. Granwhill
- Bachri, Syaiful. 2000. *Guru dan Anak didik dalam Interaksi Edukatif*. Jakarta : Rineke Cipta
- Brown. H. Doughlas. 2000. *Principle of Language Learning and teaching*. San Francisco : Addison Wesley Longman
- Harmer. Jeremy. 2003. *The Practice of English Teaching*. England. Longman
- Hornby.A.S. 1989. *Oxford advanced Learners Dictionary of Current English*. London : Oxford University Press
- Hmelo-Silver, C, E. (2004). *Problem Based Learning : What and how do students learn? Educational Psychology Review*.16 (3), 235-266
- Hmelo, Silver, C. E & Barrown, H. S. (2006) *Goal and Strategies of a Problem Based Learning Facilitator. Interdisciplinary Journal of Problem Based Learning*. 1. 21-39
- Linton, Stone. 1983. *Linguist Teaching An Introduction*, Cambridge University Press
- Moust. Jos. H. C Peter A. J Bouijs, Henk G. Schmidts. 2002. *Problem Based Learning : A Students Guide*. Wolters-Noordhoff Groningen
- Popham, James and Eva. 2003. *Teknik Mengajar Secara Sismatis*, Jakarta : Rineka Cipta
- Richard, amd Roges. 1986. *Method in Teaching Language*. Oxford : Oxford University
- Sudjiono, Anas. 1987. *Pengantar Statistik Pendidikan*. Jakarta : Rajawali Pers
- Schwarz, P. (2001). *Problem Based Learning Case Studies experiences and pratice*. London Kongan Page