

# Effect of Problem-Based Learning (PBL) and Learning Learning to Learning Result (Experimental Study on Grade V Students at SD Negeri Mekarsari)

Muhamad Zaenal Abidin\*, Etin Solihatin, Muhammad Syarif Sumantri, Adi Apriadi Adiansha

Department of Primary Education, State University of Jakarta, Jakarta, Indonesia

\*Corresponding author: [abidinjejen23@gmail.com](mailto:abidinjejen23@gmail.com)

**Abstract** The objective research is to obtain information concerning to the effect of learning strategies and learning independence to PPPPKn learning outcomes students. The research was conducted by using experiment method with design factorial 2x2 analysis in testing hypothesis. In this research, 11 from 44 student's cluster random sampling. The research was focused on tree aspect; learning strategies and learning independence to PPKn learning outcomes students. The data were collected with questionnaire and posttest. Result on the analysis it is concluded that (1) PPKn learning outcomes students are given the PBL strategies is higher than students who were given expository strategies, (2) PPKn learning outcomes students in the group of students who have learning independence high given PBL strategies is greater rather than a group of students were given expository learning strategies, (3) PPKn learning outcomes students in the group of students who have learning independence low given about expository learning strategies is larger than the group of students were given about the PBL learning strategies, (4) there is an interaction between learning strategies and learning independence to the PPKn learning outcomes.

**Keywords:** *PPKn learning outcomes, learning strategies, learning independence*

**Cite This Article:** Muhamad Zaenal Abidin, Etin Solihatin, Muhammad Syarif Sumantri, and Adi Apriadi Adiansha, "Effect of Problem-Based Learning (PBL) and Learning Learning to Learning Result (Experimental Study on Grade V Students at SD Negeri Mekarsari)." *American Journal of Educational Research*, vol. 6, no. 7 (2018): 1046-1050. doi: 10.12691/education-6-7-24.

## 1. Introduction

Education in Indonesia is still relatively low. According to the 2015 PISA (Program for International Students Assessment) report, a program that classifies the quality of the education system in 72 evaluating countries is conducted every three years, Indonesia ranks second from the bottom or 71st rank.

This can not be separated from the students' learning outcomes are low and less than KKM. According to Sudjana (2002), the learning outcomes are the abilities students possess after they receive treatment from the teacher (teacher). [1]

Learning outcomes cannot be separated from external factors that are the role of teachers. In terms of Driyakarya, teachers play a role as a teacher who helps learners to develop into more complete human beings. In helping learners get maximum learning outcomes a teacher must have a model of learning that can be a special attraction for learners, especially in solving problems in the learning process.

According to the dutch problem based learning which is a teaching model characterized by real problems as a context for learners to learn critical thinking and problem-solving skills, and acquire knowledge aimed at introducing students to a problem or case relevant to

learning materials and students are required to solve problems that take place during the learning process.

Learning with problem-based learning model will not run optimally if there is no initiative of each individual in the class or commonly called independence. Many students difficult to independent in learning.

Thus the model of Problem Based Learning learning and learning independence created in the family environment with education in the school environment, especially in the subject of PPKn affect each other on the child in achieving learning outcomes for children for the future later, in this lesson has something to do with all forms of behavior child behavior. Researchers raised research related to the model of Problem Based Learning learning and learning independence, knowing whether there is the influence of Problem Based Learning model of learning and learning independence on learning outcomes in the subject of PPKn.

## 2. Theory

### 2.1. Learning Outcomes Learning

Outcomes come from words of results and learning. For the results itself means something that is held or also the result of something, while learning is a change in the behavior of trying to gain intelligence. Learning outcomes

are the capabilities that a person possesses as a learning processor is a mastery of skills knowledge developed by the subject, usually indicated by the value of the test or the value given by the teacher. [2] Learning outcomes are behavioral changes due to educational processes in accordance with educational goals. Learning outcomes are the achievement of educational goals in students who follow the learning process. The purpose of education is ideal while learning outcomes are actual. [3]

Nana Sudjana (1991) states that learning outcomes are the abilities that a student possesses after he/she receives the lesson. [4] Sudjana (2002) further states that the results of school learning 70% are influenced by students and 30% are influenced by the environment. Learning outcomes are the abilities students have after receiving their learning experience. [1] In the formulation of the national education system goal education both curricular and international destinations.

Furthermore, according to Bloom Sudjana (1991) classified the results of the study with Bloom's Taxonomy theory is an activity that includes three categories of domains ie cognitive, effective, and psychomotor. [4] The cognitive domain is related to the internal learning outcomes that consist of three aspects: knowledge, synthesis, and evaluation. Affective domain with attitude consists of five aspects or stages of acceptance, answer or reaction, assessment, organization, and internalization. Psychomotor domains relate to the learning outcomes of skills and self-acting skills of four aspects of reflex motion, basic movement skills, abilities, perceptual, harmony, complex skill movements and expressive and interpretive movements.

From the above definition, it can be stated that the learning outcome is a level of ability achieved by students in the learning process measured by using an evaluation technique based on the information obtained, so as to describe the level of student ability in cognitive, effective, and psychomotor aspects.

John Mahoney in Kardiman and Yasin (2010) argues that civic education includes school activities such as teaching methods, student activities, administrative matters, and supervisory procedures in accordance with the school's objectives of fostering more democratic common life or developing good citizen behavior. [5]

## 2.2. Problem Based Learning (PBL)

According to Arends (2008), "Problem-based learning is a learning model with an authentic student learning approach, so learners can develop their own knowledge, grow higher skills and inquiry, establish students, and improve confidence ". [6]

Boud and Feletti (1997) and Forgarty (1997) in the Wena (2014) problem-based learning model is a learning approach by confronting students with practical problems, ill-structured or open-ended through stimulation in learning. ] In addition, Bound and Feletti argue that problem-based learning is the most significant innovation in education.

Margetson (1994) in Rusman (2012) argues that Problem Based Learning helps to improve the development of lifelong learning skills in an open, reflective, critical and

active learning mindset. [8] Problem-Based Learning facilitates successful problem-solving, communication, teamwork, and interpersonal skills better than any other approach.

The notion of Problem Based Learning has been said, it can be concluded that the Problem Based Learning (Problem Based Learning) is an applied learning in the learning process by taking examples of events which rails even that occur in everyday life which seeks to enable students can have knowledge and skills in solving problems faced later in society.

## 2.3. Expository

According to Vienna Sanjaya (2011), "The expository learning strategy is one of the learning strategies that emphasize the process of speaking. Learning materials are deliberately given directly, the student's role in this strategy is listening and listening to the material presented by the teacher. [9]

In the Directorate of Education Personnel (2008) "Expository learning strategy is a learning strategy that emphasizes the process of verbal material delivery from a teacher to a group of students with the intention that students can master the subject matter optimally. In this strategy, the subject matter is delivered directly by the teacher. Students are not required to find the material. The subject matter will be finished. Because expository strategies put more emphasis on the process of speaking, it is often called the strategy "chalk and talks". [10]

Roy Killen (1998) in Nur (1990) calls this expository strategy the term direct instructional strategy. [11] In this system, the teacher presents the material in a well-prepared, systematic and complete form so that the students just listen and digest it regularly and orderly. Students are also required to master the material that has been submitted.

From some definition suggested by experts in above, concluded that the expository learning strategy is "a learning strategy that emphasizes the process of verbal material delivery from a teacher to a group of students with the intention that students can master the learning materials optimally".

## 2.4. The Independence of Learning

Robert Havighurt in Enung Fatimah (2010) independence consists of several aspects: (a) emotion, this aspect is shown with the ability to control emotions and not depend on others (b) intellectual, this aspect is shown by the ability to solve the problem (c) social, this aspect is directed to the ability to interact with others and not rely or wait for the actions of others. [12]

Dale H Schunk (2012) divides three sub-processes of one's behavior theory, namely (1)Self-monitoring refers to emphasizing attention to some aspects of one's behavior and often combined with recording of frequency or intensity. For example, when students write papers, students periodically assess their work to determine whether the paper states important ideas, whether they can complete on time, and so on. Self-monitoring places responsibility for measuring behavior on students and

achievers. (2) Self-instruction refers to the creation of a distinguishing stimulus that regulates the emergence of self-regulating responses that lead to the implementation (Mace et al., 1989). Self-instruction involves setting up the environment to produce different stimuli. Teaching is an effective way to strengthen students' understanding and confidence. (3) Self-reinforcement refers to the process by which a person forces himself depending on the performance of the desired response, which increases the tendency of future responses. [13]

Implementation of learning independence is shown in the learning process, students rely solely on the package as the only source of main learning, resulting in the process of mutual learning. In the sense of the emergence of initiatives from members and groups to develop learning activities, develop insight, under these conditions it is recommended that students become agents of change for themselves (Self Renewal). [14]

Someone who has independence, he prefers to work alone, determine and choose how to work in accordance with his conscience. He attaches importance to autonomy in acting, the division of decisions, and the selection of various activities in achieving goals. [15]

Learning independence is an individual learning activity through (1) self-monitoring (self-monitoring) with indicators of responsibility, achievement, and always have new ideas (2) Self-instruction with self-confidence and learning spirit (3) self-reinforcement with self-appreciation indicators, using rational considerations in making decisions and improving feelings of freedom. (4) Self-evaluation with indicators gives quality decisions.

### 3. Methods

The method used in this study is experimental, wherein the experimental class students are given PBL learning strategies and control classes are given expository learning strategies. Furthermore, both classes are given test results of learning PPKn after the implementation of learning in the experimental class and control ended. While the research design used is 2x2 factorial design design

### 4. Results

#### 4.1. Differences in the Ability of Learning Outcomes of PPKn between Students Who Were Given PBL Learning Strategies with Expository Learning Strategies

The results of two-lane variance analysis between the columns showed the price  $F_{count} = 6.642$  greater than  $F_{table} = 4.11$  at the significance level = 0.05. This means  $H_0$  is rejected and accepts  $H_1$ . Once tested the difference significantly, then the next step to see which is better learning outcomes between the two treatments. Based on the results of the calculation was the average learning outcomes that get a learning-based learning strategy (A1) is 88.95 greater than the learning outcomes that get expository learning strategy (A2) average value 85.30.

#### 4.2. The Influence of Interaction between Learning Strategies and Independence of Learning on Learning Outcomes PPKn

Based on the analysis of two-lane variance between columns and rows shows the price  $F_{count} = 45.703$  greater than  $F_{table} = 7.40$  at significance level = 0.05. This means  $H_0$  is rejected and accepts  $H_1$ . Thus the second hypothesis that there is an interaction between learning strategies and learning independence is accepted significantly at = 0.05.

#### 4.3. Differences in Learning Outcomes of PPKn Students Who Have High Learning Independence Given PBL Learning Strategies Higher than Expository Learning Strategies

The third hypothesis states that the results of group learning given the strategy of learning problem based learning with higher learning independence is greater than the results of group learning given learning strategies expository, received significantly at = 0.05.

#### 4.4. The Difference in Learning Outcomes of Students Who Have Low Learning Self-sufficiency are Less Expository Learning Strategies than the PBL's Learning Strategy

The fourth hypothesis which states that group learning outcomes given PBL learning strategies with low learning independence are smaller than group learning outcomes given expository learning strategies with low learning independence received at = 0.05

### 5. Discussion

#### 5.1. First Hypothesis

In this study found that there are differences in learning outcomes between groups who were given strategies problem-based learning with groups of students who were given an expository learning strategy. This is evidenced by two path Anava test obtained  $F_{arithmatic} = 6.642 > F_{table} = 4.11$  received significant at = 0.05.

This is because the problem-based learning strategy according to Tan in Rusman (2012: 229) "in PBL students' thinking ability is optimized through a systematic group or teamwork process so that students can empower, hone, test and develop their thinking ability continuously ". So that students who are given PBL will feel more power compared with the expository model.

In contrast to expository strategies. In this study, according to Roy Killen (1998) in this model, the teacher presents the material in a well-prepared, systematic and complete form so that the students just listen and digest it regularly and orderly. Students are also required to master the material that has been submitted. So students are not required to think harder than the PBL strategy.

Based on the above explanation, the students with learning-based problem-learning strategy will get a higher score compared with students with expository learning.

## 5.2. Second

**Hypothesis** The second hypothesis states that there is an interaction between learning strategies and learning independence with proven learning outcomes, that is, the value of  $F$  calculated = 45.703 is greater than  $F_{table} = 7.40$ . Thus the provision of learning strategies should consider the independence of student learning.

This result is evidenced also by the Tukey test which gives a larger  $Q_h$  result of  $Q_t$  or  $9.60 > 3.88$  at  $\alpha = 0.05$ . This means  $H_0$  is rejected and accepts  $H_1$ .

Students who have high learning independence given the problem-based learning strategy show greater learning outcomes than students who are given expository learning strategies. Conversely, students who have low learning independence given a problem-based learning strategy show less learning outcomes than students given an expository learning strategy. This shows that in providing an appropriate learning strategy must pay attention to student learning independence

## 5.3. Third

**Hypothesis** The third hypothesis which states that the learning outcomes of groups of students who have high learning independence, higher than the group of students who have low learning independence are proven, that is with the value obtained  $F_{count} = 4.204$  greater than  $F_{table} = 4.11$  received significant at  $\alpha = 0.05$ .

This is because students who have high learning independence have 3 aspects: (a) emotion, this aspect is shown with the ability to control emotions and not depend on others (b) intellectual, this aspect is shown with the ability to solve the problem (c) social, wrong one aspect in learning independence is intellectual, this aspect is aimed at students' intellectual ability to solve a problem in the learning process. So that students who have high learning independence will be more successful compared with low learning independence.

In contrast, students with self-low learning-learning have three aspects: (a) emotion, this aspect is shown with low emotional control ability and depends on others (b) intellectual, this aspect is shown by the ability to avoid social (c) this is aimed at the ability to make less interaction with others and depend on or wait for the actions of others. So in studying students who have low learning independence tend to have the dependence on others. Without the help of others, students who have low learning independence will be difficult to accept the lessons well.

## 5.4. Fourth

**Hypothesis** The fourth hypothesis that states that learning outcomes in groups of students who have to learn independence low given the expository learning strategy are higher than the group of students who are given a learning-based learning-based learning strategy. This is evidenced by the test Tukey path obtained  $Q_{count} = 4.45 >$

$Q_{table} = 3.88$  received significantly at  $\alpha = 0.05$ . This proves that students who have to learn independence low given expository learning strategies will provide better results than given the problem-based learning strategy.

## 6. Conclude

**Conclusion:** (1) The result of learning of PPKn of students who are given problem-based learning strategy is higher than students who are given expository learning strategy, (2) there is interaction between instructional strategy and learning independence toward learning result of PPKn, (3) learning result of PPKn groups of students with high learning independence provided a higher learning- based learning strategy than the group of students given an expository learning strategy, and (4) the learning outcomes of the KDP in the group of students with low learning independence given an expository learning strategy higher than the student group which is given problem-based learning strategy.

**Suggestions:** (1) For teachers, in an effort to improve the learning outcomes of the KDP students, should be able to use learning based learning strategy appropriate. Teachers should be able to develop strategies problem-based learning in teaching in ways that are more fun for students. In determining the learning strategy that will be used should teachers also know and pay attention to the independence of student learning; (2) For the Principal, the teacher should be able to provide opportunities for teachers to develop strategies problem-based learning that is used so that activities can be varied and appealing to students, (3) For further research, should be able to develop this research by examining factors other factors that have not been studied in this study. In this case, there are many other factors that can affect student learning outcomes.

## References

- [1] Sudjana, Nana. Dasar-dasar aproses Mengajar. Bandung : Sinar Baru Algensido.2002.
- [2] Dyah Purwaningsih, Duri. Pengaruh Sikap Ilmiah Siswa Terhadap Hasil Belajar Matri Bangun Ruang. Semarang : Universitas Negeri Semarang. 2007.
- [3] Purwanto. Evaluasi Hasil Belajar. Yogyakarta : Pustaka Belajar. 2011.
- [4] Sudjana, Nana. Penilaian Hasil Proses Belajar Mengajar. Bandung: Remaja Rosdakarya. 1991.
- [5] Kardiman, Yuyus dan Yasnita Yasin. Ilmu Kewarga Negara. Jakarta : Laboratorium Sosial Politik Press. 2010.
- [6] Arends, Richard I. Learning to Teach. Singapore: McGraw-Hill, Fourth Edition. 2008.
- [7] Wena, Made. Strategi Pembelajaran Inovatif Kontemporer, Jakarta : Bumi Aksara, 2009.
- [8] Rusman, Model-Model Pembelajaran Mengembangkan Profesionalisme Guru, Jakarta : PT Raja Grafindo Persada, 2012.
- [9] Sanjaya, Wina. Strategi Pembelajaran ; berorientasi Standar Proses Pendidikan, Jakarta : Kencana Prenada Media, cet-8, 2011
- [10] Direktorat Tenaga Kependidikan, Strategi Pembelajaran dan Pemilihannya, Jakarta : Dipdiknas, 2008.
- [11] Nur, Sunardi. Strategi dalam Pembelajaran; menjadi Pendidik Profesional, Bandung : Remaja Rosdakarya, 1990.
- [12] Fatimah, Enung. Psikologi Perkembangan (Perkembangan Peserta Didik). Bandung: CV Pustaka Setia. 2010.

- [13] Dale H Schunk. *Learning Theoris An Educationaal Perpective Teori-teori Pembelajaran Perspektif Pendidikan*. Yogyakarta: Pustaka Pelajar.2012.
- [14] Anwar. *Manajemen Pemberdayaan Perempuan*. Bandung: Alfabeta. 2007.
- [15] Dwi Rianti, Benedicta. *Kewira Usahaan Bagi Mahasiswa*. Jakarta: Fakultas Psikologi Atmajaya. 2009.