



Jigsaw cooperative learning strategy based lesson study on Indonesian college study in National Information Polytechnic

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Received: 28 July 2020

Revised: 29 August 2020

Accepted: 17 September 2020

Abstract: Indonesian language courses are compulsory subjects in every tertiary institution so a learning model is needed. The purpose of this study is to describe the Lesson Study-based cooperative learning model in the Indonesian language course at the National Informatics Polytechnic. This research was conducted in 2 cycles. The subjects in this study were 16 students of Business Administration class. The research instrument consisted of the Lesson Study feasibility study instrument sheet, the observation sheet of problem solving skills assessment and the cognitive assessment assessment sheet. The results of the study used a Lesson Study-based jigsaw method of 90%. The application of the Jigsaw model based on Lesson Study was able to improve student collaborative skills by 8.26% and cognitive learning outcomes by 1.56% from cycle I to cycle II. The conclusion of this research is a strategy using the Jigsaw model based on Lesson Study can improve the collaborative skills and cognitive learning outcomes of each student.

Keywords: jigsaw; lesson study; strategy.

Abstrak: Mata pelajaran bahasa Indonesia merupakan mata pelajaran wajib di setiap perguruan tinggi sehingga diperlukan model pembelajaran. Tujuan penelitian ini adalah mendeskripsikan model pembelajaran kooperatif berbasis *lesson study* pada mata kuliah Bahasa Indonesia di Politeknik Informatika Nasional. Penelitian ini dilaksanakan dalam 2 siklus. Subjek dalam penelitian ini adalah 16 siswa kelas Administrasi Bisnis. Instrumen penelitian terdiri dari lembar instrumen studi kelayakan *lesson study*, lembar observasi penilaian keterampilan pemecahan masalah, dan lembar penilaian penilaian kognitif. Hasil penelitian menggunakan metode *jigsaw* berbasis *lesson study* sebesar 90%. Penerapan model *jigsaw* berbasis *lesson study* mampu meningkatkan keterampilan kolaboratif siswa sebesar 8,26% dan hasil belajar kognitif sebesar 1,56% dari siklus I ke siklus II. Kesimpulan dari penelitian ini adalah strategi menggunakan model *jigsaw* berbasis *lesson study* dapat meningkatkan kemampuan kolaboratif dan hasil belajar kognitif setiap siswa.

Kata kunci: jigsaw; lesson study; strategi.

How to cite: Salam, H.B. (2020). Jigsaw cooperative learning strategy based lesson study on Indonesian college study in National Information Polytechnic. *Journal of Science and Education (JSE)*, 1(1): 15-19.



INTRODUCTION

Improving the quality of Indonesian language learning in tertiary institutions is very important. Indonesian Language courses are compulsory courses in every tertiary institution so that a model or innovation is needed in the teaching and learning process. Improving the quality of learning in higher education is inseparable from various factors that must be a concern such as lecturers, students, facilities and infrastructure, laboratories and their equipment, learning models used, environment and management.

Indonesian Language courses are compulsory courses in all study programs at the National Informatics Polytechnic. This course is a subject that must be taken in the first semester, namely new students. The thing that is emphasized in Indonesian language courses is the ability of students to use good and correct language



in oral and written form. In addition, students are required to be able to compile scientific papers in accordance with the use of language that is good and right. This subject is a prerequisite in completing studies so students are expected to be able to implement it especially in writing the final project.

The implementation of Indonesian language learning lectures is signaled that lecturers tend to teach about language theories rather than training students to use language to learn science. This means that Indonesian Language courses are not optimal in training students' language skills, especially in writing and speaking aspects. In addition, the obstacle that was quite interesting was the lack of confidence of students. Mentalism like this is a barrier since writing requires a lot of discussion, dialogue and practice. Students are often silent when discussing the determination of ideas and the development of ideas. This also becomes a big obstacle in learning because the class lacks passion. Besides that, most students feel that the Indonesian Language course is a boring subject because they have known and studied Indonesian from elementary school so that students assume that it is not compulsory to learn Indonesian.

An understanding of a material will never be enough by relying on 2 SKS. Therefore, one of the methods that is quite interesting in Indonesian language learning is the Lesson Study-based Jigsaw method that directs students to better understand by finding themselves and can further apply them in tangible form. The jigsaw model was applied by dividing students into small groups and then distributing handout sheets (simple teaching materials) to students at each meeting. The material is presented in the form of handouts in accordance with the material taught at each meeting, so it is more directing students in the learning process to discover for themselves the basic concepts of the material discussed.

Based on several presentations, the authors are interested in examining the "Lesson Study Based Jigsaw Cooperative Learning Model in Indonesian Language Subjects in the National Informatics Polytechnic".

METHOD

(1) *Types of research*

This research is in the form of Classroom Action Research, a scientific activity carried out by lecturers in their own classrooms by designing, implementing, observing and reflecting actions through several cycles aimed at improving or improving the quality of the learning process in class (Kusnandar, 2012).

(2) *Location and Time*

This research was conducted in the Business Administration study program class AB 16 at the National Informatics Polytechnic. The time of the study will be from October to December 2019.

(3) *Sample*

The sample selection in this study was carried out by means of purposive sampling, namely the determination of the sample with certain considerations (Arikunto, 2010). In this study AB students were chosen consisting of 22 students.

(4) Data source

The data source in this study is the activity or learning process of Indonesian Language class AB 16 Business Administration, and documents (Learning Implementation Plan, photos of learning activities).

(5) Data Collection Techniques

Data collection techniques used in this study were interview techniques, document analysis techniques, assignments and questionnaires. According to (Sugiyono, 2017) the interview technique is used as a prelude to finding problems that must be studied with students carried out to determine student responses to the learning methods that will be used by lecturers in the teaching and learning process. Document analysis techniques namely curriculum and learning tools, in the form of syllabus development, Semester Learning Plans (RPS) made by lecturers. Giving assignments and tests to find out how far individual students get in learning Indonesian with Lesson Study. Questionnaire is an information gathering technique that allows analysts to learn attitudes, beliefs, behavior, and characteristics of some key people in the organization who can be affected by the proposed system or by an existing system.

(6) Data analysis techniques

Data analysis techniques for testing students collaborative skills data were obtained through observation of students' collaborative skills sheets during the learning activities taking place in cycle I and cycle II. The formula used for collaborative skills observation sheets is as follows. Percentage of students' collaborative skills =

$$\frac{\sum \text{score achieved}}{\sum \text{maximum score}} \times 100\%$$

Cognitive learning outcome data were obtained from the end of the test scores given at the end of each cycle I and II. In assessing the learning outcomes test the following formula is used: Value of cognitive learning outcomes =

$$\frac{\sum \text{score achieved}}{\sum \text{maximum score}} \times 100\%$$

Table 1. Determination of Success Rates

Percentage	Category
85 – 100	A
70 – 84	B
55 – 69	C
50 – 54	D
<50	E

(Source: Academic Office of the National Polytechnic Informatics, 2017)

RESULTS AND DISCUSSION

The measuring instrument used to find out the improvement of Indonesian language learning cooperatively based on Lesson Study before being given an action or after being given an action is by a written test.

Based on the results of the reflection which starts at the background of the problem, the Jigsaw model is used. This model can train students to cooperate including collaborating, enlivening the class with discussion (expert groups and home groups), encouraging students to construct various ideas in accordance with the learning objectives so as to stimulate brain cells to think. This is expected to improve student cognitive learning outcomes. In conducting research, students discuss 1) analyzing the learning model syntax, 2) applying learning model modeling.

Based on the learning carried out it can be concluded that the ability of students has increased in each cycle that is subject to as much as 2 cycles of action through the application of Lesson Study-based jigsaw learning. The results of cycle 1 namely in cycle 1 The improvement was seen in the aspects of working productively by 78.00%, the aspect of respecting 86% the compromising aspect by 86%, the aspect of sharing and contributing 90%. The first cycle posttest percentage value of 87.50% is included in category A.

Based on the second cycle, it was found that the aspects assessed included aspects of working productively of 90.00%, appreciating at 92.00%, compromising aspects at 94.00%, sharing and contributing aspects at 95.00%. The learning outcomes of the second post cognitive test of 92.75%.

An increase in the average score of each aspect assessed in poetry learning can be concluded that the activities of the jigsaw method based on Lesson Study can improve students' understanding in learning Indonesian Language class AB 16 students in the Department of Business Administration of the National Informatics Polytechnic.

Based on the results that show improvement in both process and product as well as the results of reflection activities carried out by researchers it is hoped that Lesson Study-based Jigsaw learning can be used as an alternative learning of Indonesian Language and Literature, will help improve the quality and quality of students in learning as well as being an innovative strategy can be used by lecturers in teaching and learning activities.

From the results of the application of Lesson Study-based Jigsaw learning through classroom action research (CAR) can improve the ability of students in learning Indonesian.

Lesson Study-based Jigsaw learning is one of the various methods available. From the results obtained through the two cycles that have been carried out by researchers, the Lesson Study-based Jigsaw method is the right method, because this method is able to bring up ideas, ideas, problems, solutions or whatever comes to mind.

Student collaborative skills are skills that emphasize specific assignments and share assignments in group work, compare conclusions and group work procedures, and give students greater freedom in group

work. Collaborative skills have four aspects namely work productively, respect, compromise, share and contribute (Greenstein, 2012). Cognitive learning outcomes of students through experiencing an increase from cycle I Jigsaw cooperative learning model to cycle II amounted to 5.25%. According to (Tu'u, 2015), one of the factors that influences student learning outcomes is the selection of strategies used in learning. Strategies that provide good results are learning strategies that involve students thinking and expressing ideas, for example a jigsaw model. Conversely the cognitive results obtained will be low if the students are only passive and become listeners of teacher or lecturer lectures. The key to the success of the jigsaw model is the interdependence of each student or student in the team to provide the information needed (Nur, 2015).

By using the Jigsaw method based on Lesson Study the system of thought that radiates so that it can develop ideas and thoughts in all directions, divergent, and see it as a whole in various corners of the field. Gradually the cognitive domain of students is increasing

CONCLUSION

Based on the description of the results of research and discussion, it can be concluded that Indonesian language learning can be improved through the application of Jigsaw methods based on Lesson Study. The application of Jigsaw-based Lesson Study in Indonesian language learning can help students to find new ideas in expressing opinions and in collaboration. The application of this method can increase student interest in learning and learning outcomes are expected to be more meaningful for students so that students can apply what they have learned in their daily lives. Lesson Study-based Jigsaw learning can be used to improve student creativity in learning Indonesian. Suggestions in this study are Indonesian language and literature lecturers should use varied learning methods in language learning, so students become more enthusiastic in the learning process. Lecturers should provide guidance, motivation, and enthusiasm to students so that they are more creative in growing their imagination, one of them is through language learning.

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