International Journal of Engineering & Technology, 7 (3.21) (2018) 467-469

International Journal of Engineering & Technology

Website: www.sciencepubco.com/index.php/IJET

Research paper

The Implementation of Fieldwork Program Based Lesson Study to Improve Pedagogical Skills of Teachers and Students Learning Outcomes

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Abstract

The main purpose of this research was to explain how the implementation of Fieldwork Program (Praktik Pengalaman Lapangan/PPL) based lesson study can be improve pedagogical skills of teachers and students learning outcomes. The study was conducted based on basic question, how to improve teachers' skills and students' learning outcome. This research is a class action research that uses descriptive qualitative approach. The research is conducted in PGRI Vocational School in Malang, Indonesia, with 33 students (eleventh grade) and one teacher who became a model teacher. The instruments used in this research such as (1) the execution sheet of the lesson study steps which includes 3 steps such as plan, do, and reflection (see), (2) learning observation sheet, (3) teacher pedagogic skill assessment form that contains the assessment aspect as well as the teacher pedagogic indicator (PPL students) during learning process, (4) cognitive test questions used is quiz (post test), (5) supporting data such as students' responses questionnaire and field notes. The results showed that implementation of PPL based lesson study can improve pedagogical skills of teacher from 69,4 to 77,75 point. The increase of teachers pedagogical skills have an impact on students learning outcomes. Students learning outcome can be reflect on classical completeness class, raised from 68,73% to 87,96%. Based on these results can be concluded that the implementation of PPL based lesson study can improve teachers pedagogical skills and students learning outcomes. This research will strengthen the rationale for using lesson as an alternative method to increase teachers' skill (especially on pedagogical skill) and students learning outcome.

Keywords: *lesson study; pedagogical skills; learning outcomes; fieldwork prgram*

1. Introduction

Various institution that educate future teachers including State University of Malang which has education study programs always trying to prepare the future teachers to be more professional in doing their job as teachers in the future by doing Fieldwork Program (Praktik Pengalaman Lapangan/PPL). PPL is one of many media to get real experience in education world. The form of PPL activities have developed and progressed. One of the progresses of PPL activity held by State University of Malang is the adoption of Lesson Study. By adopting lesson study in PPL, learning plan can be done collaboratively with the counselor teacher, Fieldwork counselor Lecturer (Dosen Pembimbing Lapangan/DPL), and other PPL college students. While practicing to teach in class by a student, other PPL students and counselor teacher as well as DPL can also observe and give comments as well as suggestion for the betterment of learning in the more formal forum.

Lesson study-based PPL activities is expected to improve the effectiveness of PPL goal achievement, such as preparing future teachers to improve their pedagogic capabilities. It is possible due to several reasons, such as the preparation of learning plan that always done collaboratively among PPL participant and then consulted with the counselor teacher and DPL. Collaborative planning can be a good planning and the execution will be more optima because it gets suggestions from various parties. Using PPL with lesson study pattern, each PPL students, counselor teacher, DPL as well as the school principal can learn many things about learning process (1). The execution of innovative learning will have positive impact for the students' achievements.

Previous studies have shown that the implementation of lesson-study can improve student learning outcomes (2) and (3). This findings are one of the reasons we tried to apply lesson-study to the field programe (PPL) in order to improve pedagogical skills of teachers and students learning outcomes.

The location of the school which the research on lesson study-based PPL implementation is PGRI Vocational School 2 Malang especially in XI Ak-1 class. The learning process done by teachers has not used innovative method so that they are not involving the students to be actively cooperating with other students. The low attention of the learning process cause the students to have low learning motivation, therefore it influences the students' achievement. Before conducting the lesson study, the average grade of the XI Ak-1class in accounting subject is still below the Minimum Requirement (StandarKetuntasan Minimal/SKM)of the accounting subject, in which the student reacher the minimum requirement if they get $\geq$ 75 acore and classical achievement can be reached if 85% of the students in that class has the score $\geq$ 75.Therefore, there is a need for the implementation of learning process which is based on lesson study during the PPL activity. With the implementation of lesson study-based PPL, it is expected that the achievement of the students in XI Ak-1class can be improved.

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2. Methodology/Materials

This research is a class action research that uses descriptive qualitative approach. The research is conducted in PGRI Vocational School 2 Malang, Indonesia, the location of the Fieldwork Program (Praktik Pengalaman Lapangan/PPL)in Malang city area. The subjects of this research are the students XI Ak-1 class, which are 33 people and a odel teacher who is a student of accounting program of Economics Faculty, State University of Malang, class of 2011. The research is conducted from September to November in the odd semester of the 2014-2015 academic year. The instruments used in this research such as (1) the execution sheet of the lesson study steps which includes 3 steps such as plan, do, and reflection (see), (2) learning observation sheet, (3) teacher pedagogic skill assessment form that contains the assessment aspect as well as the teacher pedagogic indicator (PPL students) during learning process, (4) cognitive test questions used is quiz (post test), (5) supporting data such as students' responses questionnaire and field notes.

3. Results and Findings

In this research, the data gained is the result of the observation from the observers in lesson study-based Fieldwork Program (Praktik Pengalaman Lapangan/PPL) activities. The observers consists of accounting program PPL students, counselor teacher, and advisor that have attended the lesson study workshop prior to the conduction of lesson study-based PPL. The result of the observation from those observers is a picture of the lesson study implementation, model teacher pedagogic skill (PPL students) and the learning result of the students in XI Ak-1 class f PGRI Vocational high school 2 Malang. This research is conducted for 5 times of open class with 4 cycles.

3.1. Teacher's Pedagogic Skill

In lesson study-based Fieldwork Program (Praktik Pengalaman Lapangan/PPL) activities, learning planning which is done collaboratively is expected to improve the quality of the future teachers in arranging the Learning Plan (Rencana Pelaksanaan Pembelajaran/RPP) and improving teacher's pedagogic sill. Teacher's pedagogic skill is assessed in each open class activity by the attending observers through teacher's pedagogic skill assessment form that consists of 4 assessment aspects, such as set induction, performing the core activities, assessment and reflection, as well as supporting factors including the use of language, time management, confidence and appearance. The observers' assessment related to the teacher's pedagogic skill can be seen in the following table 1.

Table 1: Observer's assessment related to Teacher's Pedagogic Skill

Open lesson	Assessment aspect	Score	Teacher's pedagogic skill
I	A	6,8	69,4
	B	44,6	
	C	2,8	
	D	15,2	
II	A	7,8	70,2
	B	43,4	
	C	4.0	
	D	15,0	
III	A	9,0	72,5
	B	39,5	
	C	6,0	
	D	18,0	
IV	A	8,33	73,33
	B	41,0	
	C	7,3	
	D	16,67	
V	A	7,75	77,75
	B	42,25	
	C	8,25	
	D	19,5	

Notes:

A :Set Induction

B :performing core activities

C :assessment and reflection

D :supporting factors

Based on the assessment of the observers in each execution of lesson study, it can be seen that there is an improvement on teacher's pedagogic skill. To clarify the improvement of pedagogic skill in teacher, it can be seen in the following figure 1.

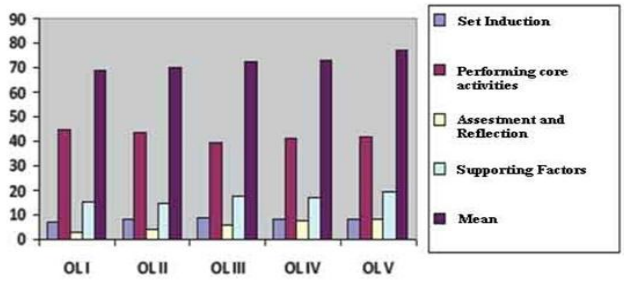

Fig. 1: Teacher's pedagogic skill score graphic of the *lesson study* activity

Lesson study implemented in PPL activity can improve the future teacher's pedagogic skill in learning process due to several reasons: (1) lesson study is an alternative way to improve the learning quality and student's learning activity. It is due to a) the development of lesson study is done and based on the professional knowledge "sharing" based on the practice and teaching result done to teachers; b) the fundamental emphasis of a lesson study is the students' learning quality; c) the goal of learning becomes the focus and the main attention in class learning; and e) lesson study will make teacher plays a role as learning researchers (Lewis, 2002); (2) *Lesson study* which is designed well will produce professional and innovative teachers. By performing the lesson study, teachers can: a) determine the lesson goal and subject unit, effective learning method; b) reviewing and improving the subjects that are beneficial for the students; c) deepening the understanding of the subjects presented by the teacher; d) determining the long term goal that is desired to be achieved by the students; e) collaborative planning; f) carefully reviewing the students' learning and behavior; g) improving the learning knowledge that can be relied on; and h) reflecting on the learning performed based on the students' perspective and their colleagues (Lewis, 2002) therefore teachers can understand the learning done by reflection from observer point of view as well as students to get a better learning innovation.

Based on the observation of the researcher since becoming the fieldwork advisor lecturer in the execution of lesson study-based PPL, the more group sharing activity between lesson study group in preparing the learning plan including the preparation of the material can give more confidence in teaching. From positive suggestions given by the observers can motivate teachers to improve the next learning quality. Therefore, lesson study pattern implemented in PPL is expected to always be in progress so that future teachers have appropriate basis to be a professional teacher.

Positive impact of the implementation of lesson study in PPL activity for lesson study group such as: 1) counselor teachers are motivated to seek for innovative methods to be implemented in class and to give suggestions for he model teacher, 2) PPL students can train to observe a learning process 3) PPL students can implement the learning methods that have been reflected to be implemented in their class better and more appropriate to the class condition. Positive asects in learning that have been implemented can be examples for the observers to be adopted in their learning process.

3.2. Learning Outcome

In this research, the learning methods used are *jigsaw*, *stay and stray*,discussion-presentation, and word-guessing. Those methods are still relatively new to be implemented in XI Ak-1 class. Each method has different impact on the students' liveliness that influence the result of the students' learning. Table 2 shows the average score and the students' achievement level in XI Ak-1during the implementation of *lesson study*.

Table 2: Mean and classical achievement level of the XI Ak-1 class students in PGRI Vocational High School 2 Malang in the implementation of Lesson Study

Lesson Study number	Mean of Class	Classical achievement level(%)
I	75,35	67,73
II	82,61	76,92
III	72,85	50
IV	82,35	87,96

The improve of class average score and classical achievement level in XI Ak-1 class students after implemented twice the cycle of the lesson study can be seen in Table2. In *lesson study* II with service industry accounting material, the average score of that class is 82,61 and the classical achievement level is 76,92%. Class average score and classical achievement level after the implementation of *lesson study* III dropped to be 72,85 and 50% respectively. This score is decreasing compared to *lesson study* II. The decrease in the learning result of the students in *lesson study* III shows that discussion presentation method is not effective enough to be implemented in service industry material. From student responses questionnaire, the material delivery using discussion-presentation is not enough to help students in understanding the material because the class situation is not quite pleasant and students do not have much opportunity to work with groups and discuss with friends. The way the teacher deliver the service industry material is not variative enough and not clear enough to deliver the material so that there are many materials that have not been understood yet by students. Moreover, during the test, students' conditions are also seem to be not prepared, because in that week, there are many tests. The lack of motivation when studying the relatively many service industry accounting materials also influence the process and the result of students' learning result

Based on the reflection result in *lesson study* III, teachers try to select the more variative learning methods and change the class condition to be more cheerful to be used in *lesson study* IV so that students can be more motivated in studying. Innovative methods are expected to help students in understanding the delivere materials so that the learning result of the students can improve.

Based on the conducted research, lesson study-based PPL can improve model teacher pedagogic skill (PPL students) and students' learning results. While the comments and suggestions from the observers in reflection step after the implementation of open class make the model teachers more motivated to plan a better learning activity so that teachers' pedagogic skill and the better learning activity. An improved skill in teachers can give motivation for the students due to the use of interesting methods according to the material and according to students' characteristics. The existing learning motivation encourage students to try to make better result. A strong motivation, both intrinsic and extrinsic can improve students' learning result.

Related research result shows hat there is an improvement of students' learning result after open class, such as research entitled: The Influence of Lesson Study Implementation Model in MGMP activities towards the Improvement of Teacher Competence and Students' Biology learning result (4). From the covariance analysis, it is known that there is a very significant difference between students' biology learning result among the lesson study model implementation (p=0,010). In other words, various lesson study treatment has influence on the learning result or the biology concept acquisition in Junior high School Students in Pasuruan Regency. Meanwhile, from the further testing it is known that lesson study implementation model gives the most significant influence on the improvement of students' biology concept acquisition which is the lesson study combined with teachers' portfolio.

Lesson study can give positive impact on students. Teachers' role as good learning facilitator can encourage the increase of students' learning motivation to study therefore the learning result also improves. Teachers' are demanded to have good pedagogic skill therefore they are able to conduct a more variative and contextual learning activities. Therefore, teachers are suggested to conduct continuous lesson study so they can get more maximum result in the effort of improving learning quality, especially students' motivation aspect. With the increase of students' motivation it is expected to improve the learning result, which in the end can help improve education quality.

4. Conclusion

Based on the above discussion, it can be concluded that the implementation of Fieldwork Program (Praktik Pengalaman Lapangan/PPL) based lesson study can improve future accounting teachers' pedagogic skills and the learning result of the XI Ak-1 class students in PGRI Vocational High School 2 Malang.

The implementation of lesson study in PPL activity is expected to keep progressing so that future teachers have appropriate basis to be professional teachers. Lesson study activity will have real positive impact on education world if conducted continuously. Therefore, teachers are expected to perform routine lesson study

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