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## EFFECTIVENESS OF LESSON STUDY LEARNING COMMUNITY MODELS TO IMPROVE LEARNING QUALITY

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**Abstract.** This study aims to describe the learning with the lesson learning community learning model to improve the quality of learning in students of elementary school teacher education program Muria Kudus University. The effectiveness model uses experimental research using the pre-test post-test control group design method. The average post test results of the experimental class students were 86.29 while the control class was 79.85. The results of the experimental class t-test were 3.46>t table while the control class was 2.35>t table. The gain test <g> in the experimental class was 0.81 (high) while the control class was obtained at 0.7 (moderate). The results showed that the application of the lesson study learning community model was effective to improve the quality of learning in students of elementary school education program at Muria Kudus University.

Keywords: effectiveness, lesson study learning community, quality of learning.

### INTRODUCTION

Professional and quality teachers are always demanded at various levels and types of educational institutions, both teacher training institutions and school institutions (Hendri, 2010). This encourages teachers to improve their professionalism, quality of performance and competence. The task of the teacher to educate, guide and train will be achieved optimally if it has a number of competencies, including pedagogical, academic, personality and social competencies (UU no 14 Tahun 2005).

Increasing the quality of teachers continues to be pursued, but in fact there are many problems related to the world of education, including the quality of the process and the results of education that have not been in line with expectations (Murtono, 2013). Improving teacher quality must be done in a fundamental and comprehensive manner. The most effective quality improvement learning can be done with lesson study (Herman, 2012).

The low student learning outcomes caused by lack of quality teachers in learning are classic reasons that are often echoed in the

world of education. Improving teacher quality must be done in a fundamental and comprehensive manner. The most effective improvement in the quality of learning can be done with lesson study (Herman, 2012). Anggara & Umi (2012) stated that one of the trainings used to improve teacher performance included MGMP-based learning lessons, namely teacher professional development programs.

Toshiya Chichibu (2013) mengemukakan Based on the school survey in elementary and middle schools, almost all schools set up a school-wide committee, a research theme, and a schedule for LS, and LSs were implemented as part of a school-wide lesson study from which an action research report is produced.

Lesson study is a professional development approach that helps teachers to develop the quality of learning. Through lesson study, it is able to seek educator professional development by studying collaborative learning based on the principle of collegality to form a learning community. Conducted by a group of teachers on an ongoing basis in planning, implementing,

observing and reporting or reflecting on learning outcomes.

The purpose of the implementation of Lesson study is: a) developing knowledge of teaching and learning material, b) increasing the ability to observe, c) improving the relationship of collegiality, d) Increasing motivation to continue to develop. Catherine Lewis in Akhmad Sudrajat (2008) suggested that the lesson study principle is a) long-term shared goals, b) choosing important learning material, c) the main focus for developing learning by students. Well-designed lesson study will make professional and innovative teachers and lesson study have effective ways to improve the quality of learning (Amri & Ahmadi, 2010).

Based on the above problems, an experimental study was conducted to determine the effectiveness of the lesson study model to improve the quality of learning.

## RESULT AND DISCUSSION

Lesson Study is an activity that can encourage the formation of a learning society that consistently and systematically performs self-improvement, both at the individual and managerial level. Catherine Lewis (2002) menyebutkan bahwa "lesson study is a simple idea. If you want to improve instruction, what could be more obvious than collaborating with fellow teachers to plan, observe, and reflect on lessons? While it may be a simple idea, lesson study is a complex process, supported by collaborative goal setting, careful data collection on student learning, and protocols that enable productive discussion of difficult issues.

Presentation of data from experimental research, normality tests and homogeneity tests can be seen in Table 1.

Table 1. Normality Test Results and Homogeneity Test

Variation	Experimental Group	Control Group
$X^2_{count}$	5,63	7,03
$X^2_{table}$	9,49	9,49
Criteria	Both groups are normally distributed	
F count	1,33	
F table	2,74	
Kriteria	Both groups are homogeneous	

Based on the normality test in Table 1, it is known that the data are normal and based on the variance test it is known that the two groups have the same variance. Furthermore, the analysis is carried out using parametric statistics to test the hypothesis, namely the test of the difference in two averages can be seen in Table 2.

Table 2. Average Two Difference Test Results

Variation	Experimental Group	Control Group
Average	86,29	79,85
$t_{count}$	3,46	2,35
$t_{table}$	2,03	2,03
Criteria	the experimental group's lesson model was better than the control group	

Table 2 shows the results that the two difference test on average in the experimental group has an average value of 86.29 with the results of  $t_{count} > t_{table}$  that is  $3.46 > 2.03$  while the control group has an average value of 79.85 with the results of the analysis  $t_{count} > t_{table}$  that is  $3.46 > 2.03$  then the results of the lesson study model are better applied in the experimental group than the control group.

The results of increasing use of the lesson study model were measured using the gain test in Table 3.

Table 3. Gain Test Results

Group	Gain	Criteria
Experiment	0,81	high
Control	0,73	medium

The results of the increased use of the lesson study model in the experimental group obtained a gain score of 0.81 with high criteria. Whereas in the control group obtained a gain score of 0.73 with moderate criteria.

In lesson study activities include three things, namely planning (Plan), implementation (Do), and reflection (See). The "Plan" begins with forming a learning community consisting of model teachers and several teacher working groups to design and create design lessons based on the material to

be taught, in making the teacher the model creates learning designs and gets input from other teacher friends. Providing learning resources and media used in learning, compiling observation sheets and assessment sheets. This is intended to concoct the best learning.

“Do” is the implementation of learning in the classroom, the teacher model applies the design lesson that has been prepared beforehand. The implementation of learning activities is also called open lesson. In the implementation the learning in the classroom was attended by observers, namely the principal, fellow teachers and some parents of students. The Observer has the task of observing the course of the learning process delivered by the model teacher. Record all activities carried out by students both positive and negative activities when learning takes place. Observer focuses on observing student activities, not to assess and correct mistakes made by the model teacher.

The open lesson stage begins with a briefing, submits the observation sheet to the observer. The observation sheet contains an assessment of indicators of teacher preparation, presentation of material, teaching methods by the teacher, and student activities and activities. The teacher model implements a learning tool that has been compiled using the lesson study model.

The last activity is see. “See” is the final activity to reflect on the learning activities that have taken place. In this activity the observer and the model teacher discussed and reviewed the learning activities. Observer provides input on problems that occur in students. Help the teacher model to find student problems when learning takes place. Provide solutions to obstacles faced by students for improvement at the next meeting.

Based on the results of the evaluation and reflection the results of the learning activities with the lesson study model went smoothly, actively, creatively and pleasantly. Model teachers and observers can understand the essence of lesson study activities,

collaboration between teachers in creating innovative learning to improve the quality of learning..

Xiangming Chen (2017) menjelaskan The findings of the study include three aspects. First, in terms of their actions, the Chinese teachers enact their understanding of teaching in public lessons through unity of knowing and doing more than conceptual explication. Second, with regard to their thinking, the Chinese teachers use practical reasoning. hird, a tendency of emulating those better than oneself is evident in novice teachers’ learning from “good” examples by expert teachers.

The effectiveness of this lesson study activity can be seen from the value of observation of learning activities and student learning outcomes. Based on the results of learning activity activities measured through the observation sheet obtained an average score of 83.3 or in a very good category, while the scores of each indicator are (1) teacher preparation (90%); (2) teacher presentation (83.75); (3) the learning method used by the teacher (84.38%); (4) student activity (79.5%) and (5) discovery activities by students (75%). This is in accordance with the findings of Anggara & Umi (2012) who conducted research and obtained results that the application of lesson study can improve teacher professional competence. Similarly, Supranoto (2015) in his research concluded that the application of lesson study can improve teacher pedagogical competence.

Thus, effective lesson study activities can improve the quality of learning. Sumardi et al (2015) in their study found that the lesson study model contributed to improving the quality of learning. Mahmudi (2009) concluded that lesson study activities can improve the performance and quality of teacher learning so that teacher competencies and

professionals become better.

This study agrees with Toshiya Chichibu (2013) that the authors consider LS as a way to facilitate a PLC in the school.

There are correlations between the methods of LS and the indicators of a PLC in elementary and middle schools. The LS methods may be developed gradually both in elementary and middle schools

## CONCLUSION

This lesson study activity begins with the planning stage (plan) which contains observing activities, analyzing the situation, designing the scheme of activities, and preparing tools and materials, the implementation phase begins with the provision of learning material. The next activity is open lesson (do), that is, the model teacher engages in classroom learning attended by observers to observe and record all student activities in the classroom and provide evaluations (see) as feedback on the learning done. The last stage is the evaluation carried out by the observer and evaluation by the researcher.

The research obtained results that an effective lesson study model was used in learning activities and was able to improve the quality of learning both teachers and students..

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