

# Implementation Lesson Study to Improve Teacher's Pedagogical Competences in SMKS Pembangunan Ternate

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Abstract: Teacher as curriculum developer has to constantly improve their competence in supporting his profession, especially at vocational high school which the output must be able to be absorbed by the industry has not fully shown the good result. This is due to the teacher's competency that is not trained consistently in accordance with the demands of the applicable curriculum. The implementation of teacher development model has not been able to maximally improve teacher competencies because the coaching model that has been carried out by schools is still an accidental form. The purposes of this study are: (i) To know the implementation of lesson study to improve teacher's pedagogic competence at SMKS Pembangunan Ternate (ii) To know the teacher's response to the implementation of lesson study. This research is a quasi-experimental one group pre-test and post-test design with questionnaire data collection techniques, observation, and interviews. The results of the measurement tests that have been carried out indicated that there is an increase in teacher pedagogical competencies (teachers' insights about students, ability to develop learning tools and ability to manage class room learning) after being given lesson study coaching. The response given by the teachers at SMKS Pembangunan was very good and benefited greatly from the implementation of lesson study.

## 1 INTRODUCTION

Development in the field of education requires continuous and systematic quality improvement efforts. Teachers who are given responsibility for vocational secondary education are no exception. This is due to global demands that require output from a vocational secondary education to have high adaptability and competitiveness in order to be able to meet market needs in business and industry.

One of the main competencies needed by a teacher in carrying out its functions according to the Law is pedagogical competence. But in fact, competencies that should be mastered by the teacher are not in accordance with the real conditions in the school. Indicators that indicate that the teacher's pedagogical competency is inadequate, namely; first, the results of evaluations conducted in the form of either internal or external supervision indicate that these teachers still need training and mentoring to improve their pedagogical competencies. This can be seen from the results of observations of the

supervisors who gave a lot of input to the teacher in terms of improving the quality of learning in the classroom. Second, the administration of learning devices used in the learning process is incomplete. Third, the relevance of the formulation of learning designs made by teachers is not fully appropriate. Fourth, learning carried out by teachers in the classroom still uses conventional learning.

Theoretically, there are many models of coaching that can be done to improve teacher pedagogical competence. However, coaching efforts that are predicted to be able to answer the problems experienced are by applying lesson study. Lesson study is one model of the professional development approach through "learning from practice". In lesson study, the teachers formulate learning objectives; collaboratively working on "learning research"; observe, document and discuss student responses to learning; and review the learning. The activity is collaborative learning. So, lesson study becomes a consistent and effective process for improving teacher pedagogical competence (Perry et al, 2009).

## 1.1 Training of Lesson Study

Lesson study is a program to improve the quality of Japanese-style learning which is considered to be the key to Japan's success in improving the quality of education (Stigler & Hiebert in Widodo et al, 2007). Lesson study is one of the strategies for teacher professional development. The teacher group develops learning together, one teacher is assigned to carry out learning, the other teacher observes student learning. This process is carried out during learning. At the end of the activity, the teachers gathered and asked questions about the learning that was done, revised and compiled the next lesson based on the results of the discussion. So that it can be said that, lesson study is a model of educator professional development through the study of collaborative and sustainable learning based on the principles of collegiality and mutual learning to build a learning community (Santya, 2009).

Pedagogic competence is a skill or ability that must be mastered by a teacher in seeing the characteristics of students from various aspects of life, both moral, emotional, and intellectual. The

implications of this ability certainly can be seen from the teacher's ability to master the principles of learning, ranging from learning theory to mastery of teaching materials.

According to the rules about the teachers, that teacher pedagogical competence is the ability of teachers in managing learning of students which at least includes: understanding insight or educational foundation, understanding of students, developing curriculum/syllabus, learning design, implementing learning that is educational and dialogic, utilization technology in learning, evaluation of learning outcomes, and development of students to actualize their various potentials.

This training and mentoring are given in 2 stages, namely; socialization stage by giving an understanding of the lesson study concept to all teachers. Preparation of learning design, application of the design and reflection on the results of the open class. The second stage is to provide intensive assistance to the teacher model in compiling future mapping. Implementing the design in class and then with other teachers reflecting to redesign it again based on reflection analysis.

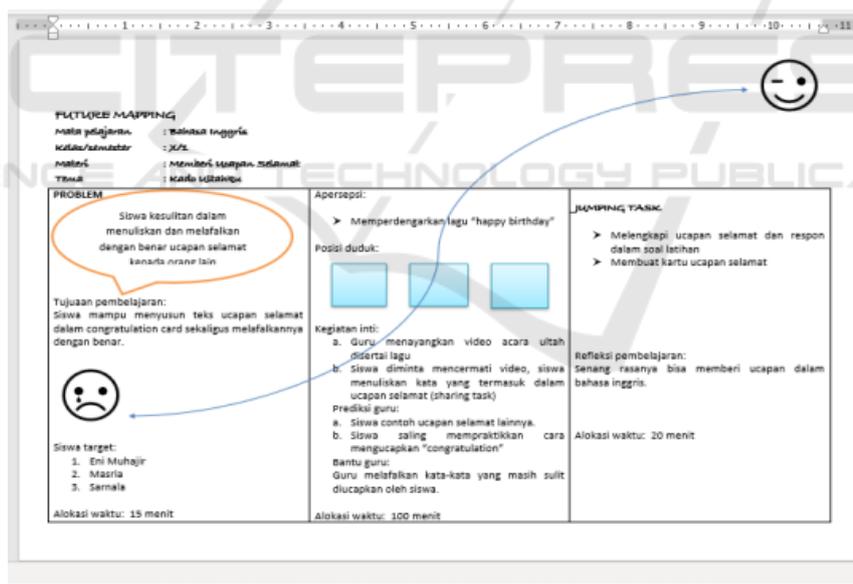


Figure 1: Future Mapping English Language Subject.

At the time of drafting the learning plan (future mapping), other subject teachers were involved so that the atmosphere of the discussion became more collaborative and the positive results were seen in the results of the learning design. The collaboration is very helpful for the model teacher to share and give constructive input to each other for improving the next lesson. Collaborative lesson study provides

benefits for teachers and students. The form of benefits obtained by the teacher is to give the teacher the opportunity to think more carefully about the goals and material to be learned by the students. Building capacity through collegial learning, which is mutual learning about things, that are perceived as lacking in knowledge and skills for guiding students (Abizar, 2017)

The thing that was felt differently by the teacher involved in lesson study compared to the training model that had been followed before was in the process of designing learning scenarios that did not touch on the needs and difficulties faced by students. In lesson study design, it was seen that target participants were targeted by the methods/models of treatment to be applied in learning. Learning scenarios designed to directly lead to how to help target participants (low ability) can resolve the difficulties and understand or complete learning materials at that time.

## 2 METHOD

This research is a quasi-experimental one group pretest-posttest design with questionnaire data collection techniques, observation, and interviews. This research only measures the impact of the implementation of lesson study on groups of teachers sampled. The pre-test was given to the teacher before lesson study training was conducted to measure teacher pedagogy knowledge. After the teacher gets lesson study training, a post-test is conducted. Then the data is processed by using SSPS.

To find out the teacher's ability to design learning is done with training before lesson study after lesson study is applied. Then to find out how the teacher's response to the implementation of lesson study in the school was conducted by interview.

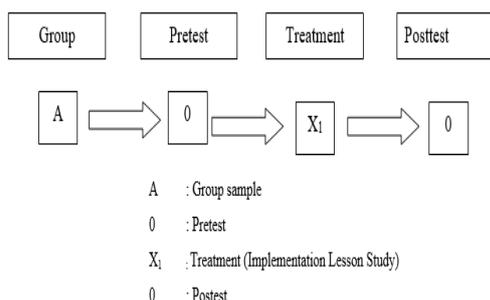


Figure 2: Design of research

## 3 RESULTS AND DISCUSSION

Based on the result of the results of the significance of the pretest for data normality test show  $0.99 > 0.05$  which means that the data obtained from the results

of the teacher's pretest were normally distributed. The data obtained from the teacher's posttest results show  $0.871 > 0.05$  which means that the data are also normally distributed (table 1).

Table 1: Data normality test.

		PRETEST	POSTEST
N		3	3
Normal Parameters(a,b)	Mean	11,67	21,00
	Std. Deviation	5,033	4,359
Most Extreme Differences	Absolute	,219	,343
	Positive	,219	,246
	Negative	-,189	-,343
Kolmogorov-Smirnov Z		,380	,595
Asymp. Sig. (2-tailed)		,999	,871

a. Test distribution is Normal.  
 b. Calculated from data.

## 4 CONCLUSION

Teacher's pedagogical competence in the knowledge aspect during the implementation process of lesson study teachers' understanding of students is better. The teachers become more observant in identifying learners' difficulties. They can make learning solutions according to the needs of students. The design of learning ability, the teacher make formulation of learning objectives has met the principles of audience, behavior, conditioning, and degree. The model teacher began to be trained in translating the scientific approach into the learning process. Another positive benefit obtained by the teacher is the creation of a culture of collegiality, which is how between teacher colleagues can freely share to improve the quality of their respective abilities. The awareness of mutual learning relationships between teachers, so it does not make it more awkward for other teachers to learn from each other and complement each other's shortcomings. And the most important thing that changes in the school felt was the formation of learning communities even though it was still limited to one small group.

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