

## INCREASING PEDAGOGICAL COMPETENCE OF ELEMENTARY SCHOOL TEACHERS' THROUGH LESSON STUDY IN TAMBUSAI DISTRICT ROKAN HULU REGENCY

**Maria Erna<sup>1</sup>, Susilawati<sup>2</sup>, Abdullah<sup>3</sup> and Betty Holiwarni<sup>4</sup>**

<sup>1, 2, 3, 4</sup> Program of study Chemistry Education, Teacher's Training And Education Faculty, University of Riau, Campus Bina Widya km 12.5 Simpang Baru, Pekanbaru, 28292, Indonesia.

### **Abstract**

*Improvement of pedagogical competence of Elementary School teachers in Tambusai district, Rokan Hulu regency through the implementation of lesson study (LS) has been performed. Improvement of pedagogical competence of teachers is important to do continuously to increase the quality of the learning process. This study is an observational study consisted of two steps, namely socialization and the application training of LS. Subjects of the research were elementary school teachers in the Tambusai, Rokan Hulu that consist of 39 teachers. Instrument and data collecting technique of the research is observation and questionnaire. LS socialization method is done by discussion of information. Training of LS has done by applying of three steps: Design lesson (plan), an open lesson (do) and reflection (see). Pedagogical competence that has been analyzed in this study is the assessment of learning implementation plan and the implementation process of learning. The results show that score ratings from learning implementation plan and implementation process of learning made improvement which is from the category K (Less) become C (Enough).*

**Keywords:** *Do, Lesson Study, Pedagogic Competence, Plan, See*

### **INTRODUCTION**

One of the ways from the government to increase the competence of teachers is using certification activities. According to UU no.14 tahun 2005 about teachers and lecturers that the professional educators with the primary task of educating, teaching, guiding, directing, training, assessing and evaluating the students in the early childhood education from formal education, elementary education and secondary education. Competencies that must be owned by the teacher of certification are pedagogical competence, personality, social and professional.

Improvement of competence of teachers throughout his working life needs to be done continuously in order to improve the quality of education. Lately, many attentions from people any circle through media offline and online saying that the teacher certification program has not significantly influence to the quality of education. Lesson Study (LS) is a model for developing professional and collaborative teachers who focus on the learning process and the learning progress of students (Masaaki, 2012). LS can have a positive effect of learning activities and helping the character building of students (Elvinawati, *et al*, 2012).

Analysis of teacher competence after applying the LS needs to be done to improve the learning systematically by mentoring. LS provides a process for collaboration and designing lesson (learning) and evaluating the success of teaching strategies that have been implemented as an effort to improve the process and acquisition of student learning.

The interview with the Head of Technical Implementation Unit of Tambusai district, Rokan Hulu that socialization LS has not been done for elementary school teachers throughout all district in Tambusai. It is necessary for implementation of LS socialization and training. This case is supported by the experience of the research team in implementing LS in the university since 2011 that the LS is necessary implemented in every schools because it can improve the professionalism of the teacher.

Improvement of pedagogical competence of teachers are analyzed based on observations and ability of teachers itself to prepare lesson plans (plan) and assessment of the implementation of teaching learning process that is open lesson (do) using observation sheet. LS socialization has done by discussion information method. At the training of the application of LS is done by point toward one of the teacher who serves as a model teacher and the rest as an observer. Each observer is required to write down his observations during the open lesson. The observations focused on the activities of the students. After the open lesson continued with a reflection step (see) that is discussions with the observer and get the conclusion of follow-up.

## RESEARCH METHODS

### Time and place

The analysis starts from October 2013 - October 2014 at SD 001 Tambusai, Kecamatan Tmbusai, Kabupaten Rokan Hulu, Riau Province.

### Population of the Research

Elementary school teachers from all district in Tambusai, Rokan Hulu, Riau Province that consist of 39 teachers.

### Steps of the Research

The steps of the implementation of teacher competence analysis after the application of LS as follows:

1. Determining of pedagogical competence of teachers through observation  
Before the training, each participant was asking to collect learning implementation plan (LIP) that have been made from their school and one of the teachers will be observed when she doing the learning process.
2. Socialization and the application training of LS  
Socialization activities are carried out by the method of discussion - information and implementation of LS training that done through *Plan*, *do* and *see* stages. At the stage of *Plan*, teacher must discuss about making lesson plan (LIP), at the stage *do* and *see open lesson* is done, one of the teachers implementing the learning and the other as an observer (observer). The results of observations will be discussed at the stage of reflection by inviting principals as coordinators.
3. Attitude determination of teacher after the socialization and training.

The attitude of teachers is determined by means of descriptive analysis using a questionnaire which is based on the scoring from a Likert scale arranged in Table 1.

**Table 1.** Quality of teachers attitude.

Statement	Score of the Answers			
	Strongly agree	Agree	Less Agree	Disagree
Positive	4	3	2	1
Negative	1	2	3	4

To group the average score into the attitude level, participants must first be determined intervals to determine the interpretation of the data based on the highest-lowest value divided by the total value =  $4-1 / 5 = 0.6$ .

After knowing the score of the interval, it can be determined a range of scales and categories of the questionnaire results. The score of the questionnaire results are interpreted in Table 2.

**Table 2.** Guidelines for the interpretation of the teachers attitude.

No	Category	Interval average score
1	Very low	1,00 -1,599
2	Low	1,60 – 2,199
3	Moderate	2,20 -2,799
4	High	2,80 – 3,399
5	Very high	3,40 – 4,00

4. Analysis learning implementation plan (LIP) which has been made by teacher that based on curriculum 2013 by using analysis RPP sheet. The LIP assessment measures as follows:
  - a. Observe the LIP and LIP assessment format which will be judged!
  - b. Give the value of each component of the LIP by affixing a check mark (✓) in the option column scores (1), (2) and (3) in accordance with your assessment of the LIP!
  - c. Give special notes or suggestions for improvement of each component of the lesson plan if necessary!
  - d. Once the assessment is completed, add the scores of all components!
  - e. Determine the value of LIP using the following formula:

$$Value = \frac{\text{Scores obtained}}{75} \times 100\%$$

RATINGS	SCORE
Very Good ( A)	$90 \leq A \leq 100$
Good (B)	$75 \leq B < 90$
Enough (C)	$60 \leq C < 80$
Less (K)	$< 60$

5.

6. Analysis of the learning process is done using observation sheet. The steps following assessment:

- Give a check mark (✓) in the column YES or NO option according to your assessment of the presentation of the teacher in the course of learning!
- Give special notes or suggestions for improvement the implementation of learning!
- Calculate the sum of the values YES and NO!
- Determine the score using the following formula!
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$$Value = \frac{\text{Sum of value YES}}{40} \times 100\%$$

RATINGS	SCORE
Very Good ( A)	$90 < AB \leq 100$
Good (B)	$80 < B \leq 90$
Enough (C)	$70 < C \leq 80$
Less (K)	$\leq 70$

## RESULTS AND DISCUSSION

LIP analysis results before the application of socialization and implementation of LS training that made by elementary school teachers in the Tambusai were rated K (Less) with an average value of LIP 55.5. These results generally show that the teacher is less able to outline the learning objectives based on indicators and standards competence that exist in the syllabus. Then there is no aspires stage and motivation that are obtained directly. Regarding the use of methods, models, strategies and learning approach is not in accordance with the characteristics of the student and the material. While the results of the analysis of the ability of teachers in the implementation of learning prior to the application of the LS is also included in the ranking K (Less) which reached a value of 50. The score of learning process is also not good because it is highly depend on the quality of the LIP that had been made previously (Kunandar, 2013). Observation results from learning process was concluded as follows:

- Teachers have not implemented LIP complete.
- Learning process has not contextual.
- Teacher interaction with students is not bidirectional
- Teachers have not been able to allocate time spent on each indicator that will be achieved

5. The learning model used was make the students noisy and irregular although some of the students become active
6. There is no students' interaction with the media
7. Mastery of teachers needs to be improved
8. The concept of study that explain by the teacher has not structured well

Analysis result of LIP created by an elementary school teacher in Tambusai after applying LS (Plan) increased by obtaining C rating (enough) with the average score from LIP that reached 71.65. The analysis finds some components of LIP that are difficult to be formulated by the teacher, namely:

1. Formulation of indicators such as the suitability of using verb operational with the measured competence and suitability to the aspect of attitude, knowledge and skills.
2. The formulation of the learning objectives such as compliance with the process and the expected learning outcomes achieved
3. Selection of teaching materials
4. Selection of appropriate learning models with learning and Scientific approaches.
5. Displaying learning scenarios (preliminary activities, core and cover)
6. Making the observation sheet about attitudes and skills assessment that accordance with the indicators of achievement of competencies.

After LIP corrected by the teacher then conducted an open lesson, namely the implementation of learning (Do). Teacher models derived from SDN 001 Tambusai and other teachers as an observer, shown in Figure 1. The results of the analysis we found the implementation of learning were rated C (enough) with the average value is 79.75.



**Figure 1.** Phase implementation of the open lesson

After the next open lesson directly carried reflection or see stage pass is discussing new learning process performed by the model teacher. Photo see the implementation phase can be seen in Figure 2. In stage Please begin by asking how the implementation of learning for teachers models by the instructor, so he found the explanation that the implementation of the curriculum in 2013 found it difficult to implement because of the tendency of learners are always silent and would not answer the question. Then another

observer that is besides the model teacher also observed what has been described the model teacher.



**Figure 2.** The stage see

Results of the analysis was concluded that the model teacher already made improvements to the learning process, such as the teacher that apply LIP that they made fully, the learning already contextual, teachers have been able to allocate the time on each indicator that will be achieved and there is already interaction of students with learning media that are made. These results show that teacher competence can be improved and developed in accordance with the development of LS in Japan as described by Brian and Susie (2011). Some components that need to be improved by the teacher model are a mastery of the material and the two-way interaction. In general, the model teacher has not able to activate all learners and interaction only runs one direction from the teacher to the learner. This is because teachers are not optimal guiding role as facilitator and motivator that has been proof from some learners that involved in the observation and analysis of the data from the experiments result that performed.

The implementation process of learning can be optimized if assistance for the implementation LS followed up deeper with training materials and practice the direct application of the LS by the instructor so that teachers get direct example of how the implementation of learning in accordance with the curriculum of 2013. The results of the discussions at the stage *see* obtained some solution or settlement that can be used by teachers to design learning for the next meeting so that there will be an increase pedagogical competence of teachers, among others:

1. Teachers always motivate learners and lead / guide learners that appropriate with their own character.
2. Teachers always ask (how and why) so that learners want to express their ideas so that will be a two-way interaction
3. Teachers do not just sit in front but always actively approached the learners until the learning objectives achieved
4. Suggesting the learning model Problem Basic Learning (PBL) that is learning and teaching process according to the problems.
5. Creating Student Worksheet for learner so that the activities is direct and Scientific approaches implemented.
6. To make looks thematic so it is recommended to teachers to create a concept map at the stage *plan* at LS.



The implementation of curriculum-based 2013 will run properly if the elementary teachers in Tambusai do:

1. A commitment to provide a special time for implementation of LS
2. Scheduling meetings
3. Invite the observer between schools
4. Creating a rule how to submit suggestions for observer
5. Reactivate Teachers Working Group
6. Involves head of UPTD, Supervisors and principals to guide the implementation stages of LS.

Results of the analysis of a questionnaire that distributed to elementary school teachers in the Tambusai, Rokan Hulu showed positive trend of 30% include very high category and 70% high category. Based on the statements that contained in the questionnaire, we can see the scores on the questionnaire statement no. 11 (I would like to become a teacher model in the implementation LS if I have been choosen) and no.15 (I can give a protest from friends' opinion who differ with my opinion bravely), including the medium category. This happens because the teachers are not familiar observed by their colleagues when doing the teaching and learning process in the classroom so many teachers are not willing to be a model teacher. While the statement no.15 category because teachers were also not used to give suggestions for improvements to the learning process of his colleagues.

## CONCLUSION

Based on the results and discussion on this research can be concluded that:

1. Application of lesson study can improve pedagogical competence of the teachers in the Tambusai, Rokan Hulu
2. Pedagogical competence of the teachers in Tambusai has increase in making LIP and implementation process of learning equally from K rank (less) to C (fairly).
3. Elementary school teachers in Tambusai in the stage *see* showing the spirit of further improving the quality of the learning process.
4. Elementary school teachers in Tambusai showed an optimistic attitude to improve pedagogical competence through the implementation of LS.

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