Collaborative Learning Group Investigation Type Based on Lesson Study in MI Al-Ikhsan Kota Jambi

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Abstract. The lesson study has been done with the collaborative learning model group investigation type for 2 cycles. Each cycle consists of 3 stages like plan, did and see. Each cycle is carried out with the same learning model but different using learning media. There were several items for reviewed and preserved in the implementation of the lesson study like relates students' skills with the ability of students to answer questions, the interaction of students with teachers, and the interaction of students with students. In addition, the results of this study indicate an increase in learning outcomes for each cycle.

1. Introduction
The lesson study was the first step to improve the quality of learning from elementary school to high level education. The quality of learning can be seen from teacher preparation before and after learning activities. According to Lewis, 2002 there were several reasons lesson study needs to be implemented in lectures, like 1) the development of lesson study carried out and based on the results of sharing professional knowledge. It’s based on the practices and results of teacher carried out on class 2) The fundamental emphasis on implementing a lesson study have learning quality for students 3) The competencies expected by students were the main focus and attention in learning in class 4) Lesson study was the basis for the development of real experience-based learning in the classroom.

The learning problems was problem always actual and faced by everyone. This caused many experts to discuss and produce various theories about learning. The theory of learning produced now was too contradictory to the truth. It more important used of the theory in the practice of life that best matches our cultural situation (Slameto, 2003). The theories about learning will determine how it should create learning itself (the learning process). The implementation of the learning process generally occurs in certain classes and sometimes boring for students. For that reason, a teacher must be professional for make learning enjoyable. For a better learning process, the teacher is also required to be able to determine the appropriate learning model, method or approach in the teaching and learning process in the classroom. The learning model will influence the teacher in making appropriate learning media in each teaching and learning process in the classroom. Selection of a suitable learning model was very influential on the results and the learning process in class. Based on observations in Madrasah Ibtidayyah Al-Ihsan Kota Jambi, many students were less active in learning. The teachers try solve the problem and only focus on some students.
2. Research methods

Subjects in this study were Madrasah Ibtidayyah Al-Ihsan Kota Jambi Students for the Fourth class level. This research was carried out in two cycles. Each cycle had stages in plan, did and see. For plan stages, the research team plan learning in class with discussions with the class teacher the Madrasah Ibtidayyah Nurul Ikhsan Kota Jambi. The topic discussion about learning media and learning model to be taught in the class and who was the model teacher.

In the reflection stages, discussion activities done by the team, the first opportunity was given to the model lecturers to convey self-reflection which included feeling expressions, a review of the learning process/flow, and a review of the achievement of learning objectives. Furthermore, other observers expressed the results of their observations in the lecture process based on facts, not just theories/opinions to improve the lecture plan or the next open lesson.

In this research, the type of data observed were qualitative and quantitative data. The qualitative data were the implementation process of learning and student activities during the implementation of the lesson study 2 cycle. It is done by using observation sheets for the implementation of lesson study for students learning activities and the implementation of the syntax of collaborative learning group investigation type. While the quantitative data were the data from student the pre-test and post test during the learning process and the observation sheet of the student practicum results.

3. Results and Discussion

Open lesson done at Madrasah Ibtidayyah Al-Ihsan Kota Jambi. The results of observations in first cycles and second cycle show that the implementation of the Lesson Study for stage plan, did, and see 100% in each of cycle. Observer consists Madrasah Ibtidayyah Al-Ihsan Kota Jambi teachers, research team from UIN STS Jambi and Jambi University. Some observers’ comments can be seen in Table 1 below.

| No | Learning Activities | Conduct of First Cycle | Comment of Observer | Conduct of Second Cycle | Comment of Observer |
|----|---------------------|------------------------|---------------------|------------------------|---------------------|
| 1. | Were there students who did not pay attention to the learning process? | 90% | 10% of students were still indifferent to learning, especially group IV (4 students sitting at the back of the right | 95% | 1-2 students from 30 people who have not been successful in learning |
| 2. | Did students ask questions to the teacher or fellow students? | 90% | students enjoy playing with their friends | 95% | When discussing some students ask |
| 3. | Did students answer questions from teachers or other students? | 90% | The teacher tries hard students to answer questions from the teacher | 95% | The teacher approaches students to study |
| 4. | Did students work with other students to solve problems? | 100% | | 100% | |
| 5. | Were students depressed in taking lessons? | 100% | Students really enjoy, enjoy learning even though they were taught by the teacher | 100% | |
|   | Question                                                                 | 100%                          | 100%                          |
|---|----------------------------------------------------------------------------|-------------------------------|-------------------------------|
| 6. | Did students seem to enjoy learning?                                       |                               |                               |
| 7. | Was there topic difficult for students to understand?                      | 100%                          | 100%                          |
| 8. | Did the teacher understand role according to the planning?                 | 100%                          | 100%                          |
| 9. | Was the method applied by the teacher right?                               | 90% Teaching elementary students need a varies learning method | 100%                          |
| 10.| Was the overall learning objective achieved in accordance with planning?   | 100%                          | In general, the purpose of the pursuit has been fulfilled |

In table 1 above, it seen that many comment fields were not filled. This showed that the implementation of lesson study run optimally in accordance with planning. The results showed an increase in the implementation of Lesson Study from First Cycle to second cycle. It happened because of an improvement in Lesson Study at each meeting. The improvements made based on the Lesson Study stages, including the stages of plan, did, see. The three stages were always carried out every meeting by the model teacher, the research team from UIN STS Jambi, Team from Jambi University and the observers from MI Al-Ihsan Kota Jambi. Some of the activities carried out at the plan stage include preparing learning plans, identifying problems found during learning and strategies that can be used by teacher models to overcome them during collaborative learning.

The plan phase carried out in each cycle. Learning application in accordance with the results of the discussion in planning. In this stage, the student learning activities were observed in detail by the observer team. In addition, the teacher models done learning according to the learning model syntax and the collaborative learning type group investigation model. Many of problem seen during the learning process will be discussed at the see stage. These activities made improvements to learning that can be done based on the results of the previous meeting. In LS activities, the model teacher will work together to study how to plan learning, carry out the learning process in the real class and then done reflection discussions to get feedback in order to improve the next science learning process in the school.

The existence of this lesson study made teachers receive and provide input related to better learning. Lesson Study also made easy for teachers and prospective teachers to create more creative learning. In this activity, the teacher received input or ideas from the LS team, the principal and the teachers MI Al-Ikhas Kota Jambi. This certainly will bring up a lot of thinking in an effort to provide the best learning for students. In addition, Lesson Study also accepting input and criticism from observer for positive impact on the teacher. The teacher can also learn how to observe learners. Lesson Study activities carried out many benefits because the teacher has been accustomed carrying out activities according to the LS section. The LS implementation in MI Al-Ikhsan Kota Jambi, was the first time this for research. The model teacher was a research team from the Jambi UIN STS lecturer. It’s for giving examples of the application the type investigation group learning model to all teachers who were observers. They can see the practice of learning directly using the model.

The application of collaborative learning model type investigation group in this study used six step structure like 1) The teacher divides students into small groups (2-4 people). 2) The teacher asks students to make suggestions in their respective groups to choose topics to be investigated in the list of topic prepared by the teacher with each group gets different topics. 3) The teacher gives students time
to identify the problem by collaborating with their respective group members, asking students to begin investigations and thinking of possible solutions by collecting and reviewing information from various sources. 4) The teacher asks students to evaluate various solutions and decide a solution. 5) The teacher asks one of the groups to present the results of the group discussion in front of the class. 6) Finally after all the discussion has been explained, the teacher develops the answers to broaden the learning horizons and answers were used to direct students to what they were going to teach.

The application of this collaborative learning investigation group type was the implementation of the Lesson Study after planning in the plan stage. The learning process based on improvements or reflection results that have been discussed in the see stage. The results of the observation showed that there was an increase in the implementation of the syntax model type group investigation syntax from 90% in each cycle.

For Learning outcomes (cognitive) MI Al-Ihlas Kota Jambi for two cycles can be seen in the table below.

| Table 2. learning outcomes for first and second cycle |
|---------------------------------------------|
| Number of students | First Cycle | Second Cycle |
| 33 Students         | 60.30       | 70.76        |
| Average learning outcomes |
| Number of successful students | 18.18% | 72.73% |
| The number of students who have not managed | 81.82% | 27.27% |

Based on data analysis in table 2, in the first cycle there were 18.18% of the 33 students who succeeded based on the results of the tests carried out at the end of learning. It happened because many students had not fully concentrated on the learning. They were still not familiar with new teachers entering their class. Observers walk from inside and outside the class make students uncomfortable. They were still not uncomfortable watched by many teachers or observers. Likewise observers who did not understand their duties as observers. They sometimes invited students to speak or students said that the observer spoke. This certainly disrupts the course of the learning process.

Students express opinions and give practical comments to the teacher model in the second cycle. Improving the quality of learning felt by the model teacher and observer in the second cycle. The teacher explained and guided students to discuss learning topic directly into groups of students. It seen in the increase of students who succeed in learning occurs in second cycle.
Especially for psychomotor values in the first cycle fifty percent of students were not complete in learning. It based on observation sheets provided in the classroom practice. Fifty percent of students were indifferent to the work in class. Characteristics of elementary school students who still enjoy playing in the class make learning not conducive. Weaknesses in first cycle become a reference in second cycle to improve the learning process. Therefore, in second cycle there was an increase in students' psychomotor values by Seventy five percent. Before learning, the teacher model really try to manage the class. Students were disciplined by giving stars or other rewards to students want to learn well.

**Figure. 2** The teacher model guided students to discussing topic

**Picture 3.** Reward given by the teacher to students who were active in learning

### 4. Conclusion

The application of type investigation group learning model through collaborative learning based on Lesson Study was able to improve student learning outcomes in MI Al-Ihsan Kota Jambi. 18.18% Students completed in first cycle and 72.73% in second cycle. Likewise, the implementation of lesson study observation increased by 90% in the first cycle and 100% in the second cycle.

**References**

[1] Dahar RW 1996 *Teori-teori Belajar* (Jakarta: Erlangga)

[2] Doig Brian and Susie S 2011 Japanese lesson study: teacher professional development through communities of inquiry *Mathematics Teacher Education and Development 13* pp 77–93

[3] Lewis and Catherine C 2002 *Lesson study: A Handbook of Teacher-led Instructional Change*

[4] Moonsri Alisa and Auijit P 2013 Lesson planning in primary school using lesson study and open approach *Psychology 4* pp 1064-1068

[5] Dudley P 2011 *Lesson Study: a Handbook* United Kingdom

[6] Eisuke S et al 2006 Indonesian lesson study in practice: case study of Indonesian mathematic and science teacher education project *Journal of In-service Education 32* pp 171-184
[7] Sahrin A and Suhaili 2014 The impact of lesson study on primary mathematics teachers’ instructions in Brunei Darussalam Proc. ICEMST vol 1 pp 90-95

[8] Slameto 2003 Belajar dan Faktor-faktor yang Mempengaruhinya (Jakarta: Rineka Cipta)