



Implementing the School-Based Lesson Study in Elementary Schools

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Abstract

This study aimed at describing and interpreting the implementation of school-based lesson study in SDN 1 Kretek. In conducting this study, the researcher employed the qualitative approach. The data were gathered through in-depth interview, questionnaire, participatory observation, field notes, and documentation. Then, in order to validate the data the researcher performed source triangulation and technical triangulation. The data were analyzed using Interactive Analysis Model by Miles and Huberman. The results of the study were as follows. First, the planning of school-based lesson study program in SDN 1 Kretek had been conducted at the beginning of 2014/2015 Academic Year by establishing the school-based lesson study program in SDN 1 Kretek. Second, the school-based lesson study in SDN 1 Kretek was implemented in three stages namely planning, implementation, and reflection. Third, the lesson study evaluation was conducted by each teacher who had performed the open class and the evaluation was conducted thoroughly by holding a meeting of school-based lesson plan team in the elementary school at the end of the academic year.

Keywords: lesson study, school-based lesson study

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Introduction

The 21st Century that is marked by the globalization of technology and information has brought about enormous impact to teachers' role in the process of learning and education. The challenges that teachers encounter are getting bigger. Teachers are demanded to be a leader, a role model, and an active individual in this rapidly changing world. On the other hand, teachers' tasks in education become more complex. The teachers' old role as the only information and learning source cannot be maintained anymore. Teachers should find new roles that are more relevant and contextual to this development.

Teachers are one of the most important factors in the achievement of learning success within a school. Therefore, teachers should have very strategic function, role, and position. The experts also emphasize the importance of teachers' role and position in the learning success of a school. Rowe (2003, p. 21) in a study report by Victorian Quality Schools Project (VQSP) has emphasized the importance

of teacher quality as the main determinant for the students' learning experiences and the educational quality that will be achieved. Similarly, Anderson (2004, p.31) states that teachers are one of the dominant factors that influence the students' learning process indirectly. In addition, Beeby in Beeby's Stages of Development (Barrett, Chawla-Duggan, Lowe, Nickel, & Ukpo, 2006, p. 3) mentions that teachers' education and preparation are considered as the main key of educational quality. Due to these reasons, the efforts to improve the teachers' quality through the programs of teacher professionalism and development should be implemented.

The issuance of the Law Number 14 Year 2005 regarding Teachers and Lecturers is one of the government's efforts to improve and develop the teacher professionalism in Indonesia. According to this law, teachers are professional educators with the following main task: educating, teaching, guiding, directing, training, assessing, and evaluating students from the childhood education, the formal education, the elementary education, and the high education.

One of the important points in this law is the teacher's position as professionals who have played their role as the agent of learning in order to improve the national education quality. A professional teacher should have four main competencies namely pedagogic competencies, professional competencies, personal competencies, and social competencies as an inseparable unity from the learning material mastery competencies that have been contained in the curriculum.

Since the statement of teacher as a professional employment and along with the provision of legal sets and operational policies, the efforts to improve the teacher's professionalism have been more seriously intensified. This matter is apparent from the efforts of improving teacher qualification through teacher certification program. These efforts certainly should be pursued and be developed continuously in order to maintain the teacher professionalism.

One of the ways to improve the teacher professionalism is devising a Professional Learning Community (PLC). PLC is a group or a community of educators who engage themselves into a struggle to achieve an understanding toward the students' learning needs and learning tendency naturally so that the educators can provide better education (Edwards, 2011, p. 145). In PLC, the teachers help each other to find the most effective way for implementing the learning principles and they become the researchers in their own classroom. This way is effective for improving the teacher's professional capacities and the teacher's authentic skills development and for providing opportunities for them to prove, to share, and to expand the knowledge and the experiences that they have previously attained (Chassels & Melville, 2017, p. 735).

One of the professional learning community forms is lesson study. Lesson study is a model of educator professional development using collaborative and continuous learning review based on the principles of collegiality and mutual learning in order to devise a learning community. In the lesson study, teachers are collaborating in designing the lesson plan, in performing open class (learning activities), in performing reflection (after-learning process evaluation), and in archiving the notes on the learning activities (Masaaki, 2012, p. 3).

Lesson study is one of the efforts to improve teacher's skills and professionalism.

Based on the interview with the principal, the researcher found that the teachers in SDN 1 Kretek started learning lesson study around three years ago or in 2012/2013 Academic Year. Several top-down programs from both the Office and the Technical Implementation of Basic Education Manager (UPT-PDD, *Unit Pelaksana Teknis-Pengelola Pendidikan Dasar*) in Kretek District are namely seminars about lesson study and Teacher Work Group (KKG, *Kelompok Kerja Guru*) activities that deal with the lesson study in the coverage of Kretek District.

At the beginning of 2014/2015 Academic Year, SDN 1 Kretek planned a school-based lesson study program. In this academic year, the state elementary school devised a school-based lesson study team in order to devise the lesson study programs. The school-based lesson study in the state elementary school has been bottom-up program that is run based on the teachers' awareness and desire to improve their skills.

Based on the interview with the principal and the teachers as well, the researcher found that the implementation of the school-based lesson study in SDN 1 Kretek is not known yet its effectiveness and of implementation characteristics. The reason is that there is not yet an evaluation toward the implementation of the school-based lesson study in the state elementary school. In addition, the teachers' understanding toward the school-based lesson study is low. There are only several teachers who have attended training programs regarding the lesson study. Most of the teachers attain the information about lesson study from school supervisor, principal, and other teachers.

The implementation of school based-lesson study in SDN 1 Kretek has several obstacles. Based on the results of an interview with the principal and the lesson study team, the obstacles are the teachers' limited understanding toward lesson study, the management of lesson study program that should be improved, and the absence of specially allocated fund for the lesson study implementation. In order to implement the lesson study well, certainly these obstacles should be handled by the teachers and the principal in order that the implementation of the school based-lesson study in SDN 1 Kretek can be maximum.

From these problems, the researchers in this study would like to focus on the implementation of the school based-lesson study in SDN 1 Kretek with the following problem

formulation: How is the implementation of school based-lesson study in SDN 1 Kretek? Moreover, this study aimed at describing and interpreting the implementation of the school-based lesson study in SDN 1 Kretek.

The results of this study are expected to provide both theoretical and practical benefits. In terms of theoretical benefit, the results of this study are expected to be one of the reviews toward the efforts of performing in-depth study on the implementation of school-based lesson study. Then, the findings in this study are also expected to contribute some insight toward the efforts of understanding the importance of implementing the school based-lesson study as one of the ways to improve teacher's professionalism, skills, and learning quality. On the other hand, in terms of practical benefit the results of this study are expected to provide some contribution to students, teachers, and schools. Through this study, the researchers would like to expect that students can experience well-qualified learning activities since teachers prepare the learning materials well and students can help each other in the learning activities through the collaborative learning method. Then, the benefits of this study for teachers are: improving teachers' skills and cooperation in managing learning activities through teacher collaboration; encouraging mutual learning process in planning, performing, and reflecting the learning activities; deciding the appropriate learning method or model so that students will be facilitated in achieving their learning objectives; improving teachers' knowledge and understanding toward school based-lesson study; and improving teachers' skills and professionalism so that the learning quality in the school will be improved. Next, the benefits of this study for schools is attaining more complete description on the implementation of school based-lesson study; as a result, this study can be a consideration regarding the implementation of the school based-lesson study in the upcoming years. Last but not least, schools can gain feedback and suggestions in relation to the implementation of the school based-lesson study.

Method

This study was a qualitative research. According to Sugiyono (2010, p. 14), qualitative study is a study that is conducted in order to investigate the conditions of natural object. This type of study was implemented in order to attain

in-depth data regarding the implementation of the school-based lesson study in SDN 1 Kretek so that the understanding toward the characteristics of the school based-lesson study implementation in the state elementary school might be improved. In conducting this study, the researcher became the key instrument in gathering the data in the field.

The researchers employed the descriptive analysis setting in order to explain the phenomena, the situations, or the events that had occurred. This study did not seek/explain the relationship, did not test, or even did not predict the variables; instead, this study only depicted the variables. The objective of a descriptive study is to has been describe, depict, or illustrate the facts in the field systematically, factually, and accurately. In this descriptive study, the data that had been gathered from the field came from the results of in-depth interview, participatory observation, field notes, and documentation.

The study was conducted in SDN 1 Kretek, Kretek District, Regency of Bantul, Province of Yogyakarta Special Region. This state elementary school had been selected because since the 2012/2013 Academic Year the school has implemented the lesson study activities. The study took place in the 2014/2015 Academic Year, namely from November 2014 to May 2015.

Unit of analysis is the most fundamental element of a scientific research project. Unit of analysis is the subject (who or what) of a research on which a researcher generalizes the results of the study (Long, 2013, p. 3). Unit of analysis is also a unit under investigation that might be in the form of individuals, groups, objects, or social backgrounds such as individual activities or group activities that serve as the subject of the study. In this study, the unit of analysis was the principal, the lesson study team, the teachers (the model teachers and the observers), and the students of SDN 1 Kretek who were involved in the school-based lesson study.

According to Lofland, Snow, Anderson, & Lofland (2006, p. 70), the main data source in a qualitative study is words and actions and the rest will be additional data such as documents and alike. The data from the results of this study were attained from two sources namely the primary source and the secondary source. The words and the actions of the respondents who had been observed or been interviewed were the primary data source. These words and actions

were in the form of attitudes, behaviors, and activities of the school members who had been involved in the lesson study. The record-keeping of the primary data source was conducted using interview, observation, and field notes. On the other hand, the secondary data in this study were the one that supported the primary data and the secondary data might come from the written sources or the photos.

The data gathering techniques that the researcher employed were in-depth interview, participatory observation, field notes, and documentation. The in-depth interview was conducted to the principal, the lesson study team, the model teachers, the observing teachers (the observers), and the students. Then, the participatory observation was conducted to the planning, the implementation, and the evaluation of the lesson study program in SDN 1 Kretek. Next, the field notes were implemented in order to complete both the observation and the interview data. On the other hand, the documentation was implemented in order to gather the data from the non-human resources such as the structure of the lesson study caretakers, the letters, the lesson plans, the schedule of activities, the reflection notes, the activity pictures, and alike.

The data gathering instrument in this study was the researcher himself; in other words, the researcher served as the key instrument. In a qualitative study, a researcher will be the main data gathering instrument. However, due to the limited five senses in capturing and memorizing all matters that the informants remembered and stated, the researcher should design a guideline for the in-depth interview, the participatory observation, the field notes, and the documentation.

The inspection on data validity in this study was conducted in order to generate the valid findings and data interpretation that might be accepted by all parties. Therefore, there should be credibility attained using the instruments such as field research and triangulation. There were four criteria that might be employed in inspecting the data validity and these criteria were credibility, transferability, dependability, and confirmability. The data validity inspection technique that the researcher employed in this study was triangulation, which has been the part of credibility criteria.

Triangulation is a technique that is implemented in order to attain the correct data and this technique combines multiple data

gathering techniques and existing data sources. Triangulation is also implemented in order to measure the field data validity (Sugiyono, 2010, p. 330). There are two types of triangulation that can be implemented namely the technique triangulation and the source triangulation. The technique triangulation is implemented in order to measure the data validity by inspecting the data truthfulness from the different techniques, for example conducting in-depth interview to the principal, conducting participatory observation to the implementation of the lesson study, and performing documentation study. On the other hand, the source triangulation is implemented in order to measure the data validity from the different sources, for example asking relatively similar questions to several sources such as the principal, the chief of lesson study team, and the teachers.

The qualitative data analysis was conducted since the beginning of the field study, during the field study, and after the field study had been done (Sugiyono, 2010, pp. 336–338). The data analysis at the beginning of the field study was conducted toward the preliminary study data or the data secondary that would be manipulated in order to determine the focus of the study. The focus of this was still temporary and would be developed after the researcher began the field study and during the field study.

During the field study, the data analysis was conducted during the data gathering activities and after the data gathering activities had been done in certain period of times. The activities in the qualitative data analysis were conducted interactively and continuously until the activities had been completely done; as a result, the data would be saturated (Miles & Huberman in Sugiyono (2010, p. 337). The steps of analysis were displayed in Figure 1.

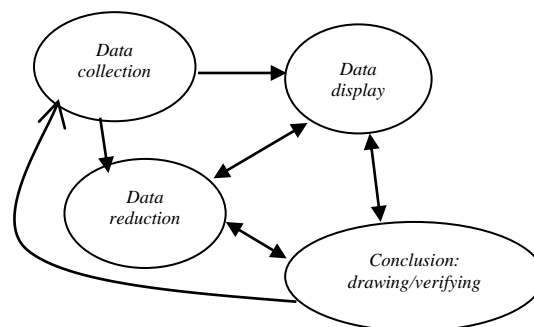


Figure 1. Interactive Analysis Model (Miles & Huberman in Sugiyono (2010, p. 338)

Data Collection

The first step in conducting this study was gathering as many data as possible in the field. The data could be attained from the interview, the observation, and the documentation. During the data collecting activities, the researcher should think about the data that had been attained and the ways to develop the strategies for collecting new data. The researcher should also correct the unclear information and direct the analysis in relation to the impact of field work generation.

Data Reduction

Reducing the data implied summarizing the data, selecting the main topics, looking for themes and patterns, and eliminating the unnecessary matters. The data that were attained from the field were abundant; therefore, the researcher should note the data, summarize the important topics, and focus the study to the important matters. Thereby, the data that had been reduced would provide clear description and ease the subsequent data gathering activities; in addition, the researcher only needed to recall the data whenever it was deemed necessary. The data reduction was guided by the objectives that would be met.

Data Display

After reducing the data, the researcher then displayed the data. The data were displayed in the form of narrative texts, tables, graphics, diagrams, pictograms, and alike. Through these data displays, the data were organized and were classified into relationship patterns so that the researcher could provide better understanding. Such data display would also ease the researcher to understand what had been going on and to plan the next actions based on his understanding.

Verification

The expected conclusion in a qualitative study might be new findings that had never been found. The intended findings might be descriptions of an object that previously was unclear. In addition, these new findings could be in the form of causal or interactive relationship, hypothesis, or theory. Conclusions should always be verified during the study. The verification could be conducted by gathering new data during the study. At the end of this study, the expected conclusion would be a description that could explain the

implementation of school based-lesson study in SDN 1 Kretek.

Results and Discussions

The History of Lesson Plan in SDN 1 Kretek

Lesson study has been quite well known in SDN 1 Kretek. Based on the results of the interview, the researcher found that the teachers in SDN 1 Kretek started learning about lesson study around three years ago or in 2012/2013 Academic Year. At the beginning, the lesson study in this state elementary school was a top-down program that had been introduced by the government through the Office of Education or the UPT-PPD in Kretek District. The objective of this program was improving the teachers' skills and professionalisms. Several lesson study programs that had been provided by the government were lesson study training or lesson study training and education, seminar by the Office of Education in the Regency of Bantul, and alike. The lesson study was also developed through the forum of Subject Teacher Workgroup.

In addition to these programs, in the first semester of 2014/2015 Academic Year the UPT-PPD in Kretek District also evaluated the 2013 Curriculum using the lesson study. This activity involved all elementary schools under the region of Kretek District, including SDN 1 Kretek. The evaluation activities included the activities of designing learning activities by designing the lesson plans according to the curriculum standards. Then, as part of these activities, the model teachers taught the students in a classroom with several other teachers who served as the learning observers. After the learning activities had been accomplished, these teachers discussed the learning activities. In the next stage, the model teachers presented their learning activities in front of the district-level teachers and discussed these learning activities together. The activities of 2013 Curriculum Evaluation using the lesson study certainly strengthened the lesson study culture that had developed in Kretek District.

Lesson Study Program Planning

Based on the results of the interview and the documentation study, SDN 1 Kretek planned the school based-lesson study at the beginning of 2014/2015 Academic Year. In this academic year, the state elementary school devised a school-based lesson study team in order to plan,

to regulate, and to evaluate the implementation of the lesson study in the school. The lesson study team of this school consisted of principal, teachers, and educators from SDN 1 Kretek in collaboration with the UPT-PPD from the Kretek District in order to coach the implementation of the lesson study programs. This type of cooperation has been very important for the success of the lesson study programs in SDN 1 Kretek.

One of the tasks that the school based-lesson study in this school had was planning the lesson study programs by scheduling the open class implementation. The open class activities would be conducted from March to May 2015. These activities were performed by the teachers of Grade 1 to Grade 6 and the teachers of Islamic Education. The model teachers were the teachers of each grade and the other teachers would serve as the learning observers. In this academic year, SDN 1 Kretek invited the teachers from Cluster 01 of Kretek District and the UPT-PPD of Kretek District in two sessions of open class implementation namely on the open class of 2B and of 6A.

In scheduling the open class, the lesson study team should consider many aspects in order that the open class activities would not disturb the other teaching-learning activities. Some of the considerations were namely adjusting the open class schedules to the timetables, selecting the unoccupied teachers as the learning observers in the open class activities, and alike. These considerations were heavily necessary for the sake of the fluency of the school based-lesson study programs in SDN 1 Kretek.

In addition to the schedule adjustment, another factor that should be considered in planning the programs was the fund planning. SDN Kretek 1 had not allocated the lesson study programs in the School Fund and Activity Plans (RKAS, *Rencana Kegiatan dan Anggaran Sekolah*). So far, the budget of the school based-lesson study programs made use of the fund from the School Operational Aid (BOS, *Bantuan Operasional Sekolah*) although there had not been any special allocation for the lesson study programs. As a result, there was a concern that the implementation of the school based-lesson study would not be maximum. This situation should be an important note on the implementation the lesson study in the future so that this program might run well.

Within the lesson study implementation, SDN 1 Kretek was in cooperation with multiple external parties in order to improve the quality of their lesson study. In order to improve the quality of their lesson study, this state elementary school was in cooperation with and under the coordination of the UPT-PPD of Kretek District, the schools in the same cluster, and the university students. This cooperation was very important regarding the fact that the external parties could provide feedback from different points of view regarding the lesson study implementation and they also could share the knowledge regarding the school based-lessons study implementation.

Lesson Study Program Implementation

The implementation of the school based-lesson study in SDN 1 Kretek started on the second semester of 2014/2015 Academic Year namely from March to May 2015. The school based-lesson study in this state elementary school was conducted in three stages namely Plan, Do, and See. In the Plan stage, the model teachers were in collaboration with other teachers in designing the lesson plans and the learning support instruments. The lesson plans were designed based on the implemented curriculum, namely the Educational Unit Level Curriculum (KTSP, *Kurikulum Tingkat Satuan Pendidikan*), by referring to the syllabus, the annual programs, and the semester programs. In addition to be in collaboration with other teachers, the model teachers also requested feedback from the other teachers in order to revise the lesson plans and their learning support instruments. Then, the model teachers requested feedback and approval from the principal upon the lesson plans that they would implement in the open class activities.

Before the open class activities started, usually the teachers were briefed first. In this activity, the model teachers provided a short description about the learning activities that they would implement. In addition, the model teachers also distributed an observation sheet to each observing teacher. The briefing took a short time, usually around 10 minutes.

In the Do stage, the model teachers taught the open class according to the schedule that had been set. The model teachers also taught the class based on the lesson plan that had been designed together. Based on the results of observation and interview, most of the model teachers did not seem to be awkward in teaching

the open class despite the presence of the observing teachers. As a result, the learning activities ran smoothly.

The teaching-learning activities that the teachers conducted emphasized the collaborative learning. The teachers devised learning groups in which each group consisted students with high academic performance, students with intermediate academic performance, and students with low academic performance. The intention of such group division was that the students could help each other within the learning process so that none of them would be prominent.

In the learning activities the students seemed to be active and enthusiastic despite the presence of the observers. The students did not seem to be disturbed in their learning activities despite the fact that there had been many observers in their classroom. The students seemed enthusiastic, active, and happy in following the learning process because they were directly involved in the activities of discussion and experiment.

In the observation activities, the observers played their role well. The observers performed their activities using the observation sheet and the camera in order to capture the events or the phenomena that occurred in the classroom. The observation activities that they performed were focused on the students' learning activities. Every event or phenomenon that had occurred was well-noted and well-documented by the observers. The observers took every single note on the observation sheet and documented the important events using their gadgets and digital cameras. The observers could directly understand and note the students' name into their observation sheet because every student put on their nametag on their uniform. The use of these nametags assisted the observers in performing their activities because they could understand and note every event or phenomenon clearly and specifically.

The moderator initiated the See stage for the lesson study activities in Grade 6A by giving greet and gratitude to both the model teachers and the observing teachers. Then, the model teachers gave their impressions and notes on the learning activities both inside and outside the classroom. The model teachers also presented several obstacles that had been found during the teaching-learning activities.

In the reflection activities, the model teachers and the observing teachers discussed

together the phenomenon that had occurred in the teaching-learning activities. These activities were conducted after the open class activities or the teaching-learning activities had been done. The model teachers and the observing teachers were involved in a serious discussion in order to find the causes behind the occurred phenomena along with the solutions to those obstacles.

Lesson Study Evaluation

The lesson study evaluation was a systematic process in gathering and interpreting information in order to identify the level of implementation and to determine the follow up of the lesson study program. The evaluation toward the school based-lesson study in SDN 1 Kretek was conducted in order to identify how far the program had been implemented, to identify the program effectiveness, and to identify the weaknesses on the program implementation as a reminder for the implementation of the lesson study in the future.

Based on the results of the study and the observation, the researcher might conclude that the school-based lesson study in SDN 1 Kretek had been implemented in the classroom level and the school level. In the classroom level, the teachers set oral and written reports regarding the results of the lesson study implemented to the principal or the lesson study team of SDN 1 Kretek. In the school level, the lesson study team held a meeting to evaluate the implementation of the lesson study in overall. This evaluation aimed at improving the learning quality and the teachers' professionalism as well as to identify the strengths and the weaknesses of the school-based lesson study implemented in SDN 1 Kretek. This evaluation served as a decision-making basis in relation to the implementation of lesson study in the upcoming years.

Multiple efforts had been conducted by SDN 1 Kretek in order to overcome these obstacles and one of such efforts were establishing cooperation with many parties in the lesson study implementation (for example, cooperation with the UPT-PPD of Kretek District, with schools under the same cluster, with universities, and alike) and improving the teachers' understanding toward the lesson study by inviting experts to share their vision, by holding seminars, and by performing other activities, and also allocating the lesson study budget into the school's budget and activities

plan in the next fiscal year so that the lesson study could be implemented better.

Benefits of School-Based Lesson Study

Based on the results of the interview, the researcher could conclude that the lesson study provided enormous benefits for both teachers and students. For the teachers, the lesson study could improve their cooperation, improve their skills in planning the learning activities better, and improve their professionalism in managing the learning activities. On the other, for the students through the lesson study they could attain better learning experiences; as a consequence, the students attained well-qualified learning experiences and the students' learning skills would develop optimally.

Planning of the Lesson Study

Lesson study is a process of developing professional competencies through collaborative and continuous learning review by devising learning communities. At the beginning, the teachers of SDN 1 Kretek learned about the lesson study from the activities that the governmental institutions conducted such as the Office of Education, the UPT-PPD of Kretek District, and others. This lesson study program was a top-down one in which the teachers of the state elementary school conducted the lesson study based on the ideas provided by the governmental institutions. Such program has been one of the government's efforts in improving teachers' competencies and professionalism so that the educational quality in Indonesia will improve. In such program, the governmental institutions as the pioneer have more dominant role in regulating the program operation starting from the planning to the evaluation process. As a result, the role of teachers or schools is not quite significant.

The school based-lesson study in SDN 1 Kretek had been implemented since the 2014/2015 Academic Year. The school based-lesson study in this state elementary school had been a bottom-up program in which this program was implemented based on the teachers' or the school's initiative. The teachers of this state elementary school played their role in planning, implementing, and evaluating the program. The school based-lesson study in the school might be considered being developed based on the teachers' awareness to improve their competencies and professionalism.

According to Liedl (2011, p. 26), the strength of bottom-up programs lies in a simpler administrative structure. This is in contradiction to the top-down programs whose weakness lies in the system complexity and the involvement of several parties/organizations under different management. In the school based-lesson study, the school has full authority in managing and regulating the lesson study that has been implemented.

Similar to other programs, the school based-lesson study also demanded good planning. Planning is a projection of what should be done in order to meet the objectives and the targets that have been set (Kaufman and Hadikumoro in Somantri (2014, p. 1). Educational planning has important role and belongs to the preliminary stage in the process of educational management, which serves as the guidelines of implementing, controlling, and monitoring the educational practice.

The planning of the school based-lesson study in SDN 1 Kretek had been good. In the program planning, the state elementary school established a lesson study team at the beginning of the academic year. This team served to plan the program, arranged the program implementation, and evaluated the school based-lesson study implementation. The lesson study team of SDN 1 Kretek was in collaboration with the UPT-PPD of Kretek District in order to gather feedback and suggestions regarding the school based-lesson study implementation in this state elementary school. This cooperation has been in accordance the opinion by Kuno (2011, p.4) who states that in the organization of a lesson study school demands a committee of development which is responsible to develop the lesson study based on the instructions and the guidance from the principal, the vice principal, and even the teachers.

In the program planning, the lesson study team arranged the schedule of the open class by considering many factors such as the implementation period of the open class, the observers' schedule that should not be intervened, and alike. These considerations were necessary in order that the learning activities in the other classrooms would not be disturbed so that the implementation of the lesson study would run smoothly. These considerations have also been in accordance with the opinion by the lesson study team (2007, p.14) which stated that school should consider the timetables, the teacher groups' schedule, the senior teachers'

opinion as the lesson study coordinators, and the conduct of the lesson study stages.

Still in the program planning, the lesson study team of SDN 1 Kretek had not allocated special fund for the lesson study. In the practice, the teachers made use of the school operational fund (BOS, *Bantuan Operasional Sekolah*) in order to cover the cost that should be spent for the sake of the lesson study. This situation should be given special attention for the lesson study team in this state elementary school regarding the fact that budget was one of the important factors in implementing a program so that the program could run smoothly.

Implementation of the Lesson Study

In general, the school based-lesson study in SDN 1Kretek was implemented in three stages namely Plan, Do, and See. In the Plan stage, the teachers collaborated with the teachers under the same level and the other teachers in planning the learning activities. Then, in the Do stage the model teachers conducted the open class activities according to the periods and the other teachers served as the observers in their classrooms. Next, in the *See* stage both the model and the observing teachers reflected immediately the learning activities that the model teachers had performed after the learning activities had been done. These stages have been in accordance the stages of a lesson study that has been proposed by Hendayana, Suryadi, & Karim (2006, p. 10) in which they mentioned three stages namely Plan (planning the open class), Do (implementing the open class), and See (reflecting on the open class implementation). The three stages have also been in accordance with the definition that has been proposed by Masaaki (2012, p. 5) in which he defines that lesson plan is an overall sequence of designing lesson plans, performing open class (learning activities), holding a forum of reflection (after-learning discussion), and archiving the notes on the learning activities.

According to Fernandez & Yoshida (2004, pp. 7–9), the three stages of lesson study that had been implemented in SDN 1 Kretek, namely the Plan, Do, and See stages, just met the main stages of a lesson study: collaborating the lesson study planning, viewing the lesson study in action, and discussing the lesson study. Fernandez & Yoshida (2004) mention that the three main stages can be equipped with three additional stages namely revising the learning activities, providing a new version of learning

activities, and sharing the reflection on the new version of learning activities. If the three additional stages can be implemented, then the teachers will be able to design better learning activities and the students will be assisted in meeting the learning objectives that have been set.

The implementation of the three additional stages in the lesson study certainly demands additional time. If teachers want to implement the three additional stages, then they should be wise with their time management. The reason is that teachers also have the duty to teach according to the standards that have been set by the government. The time management should be precise in order that the teaching-learning activities can run smoothly according to the programs that have been designed.

In the implementation of the lesson study within the SDN 1 Kretek, the model teachers collaborated with the teachers under the same level and the other teachers starting from the planning, the implementation, and to the reflection. In addition, the teachers from the lower classes had more collaboration with the other teachers from the same level while the teachers from the higher had more collaboration with the other teachers from the same level. Such collaboration was intended to implement the lesson study better because the learning materials that would be distributed were not significantly different. In addition, the manners in distributing the learning materials were also different between the teachers in the lower classes and those in the higher classes and the difference lied in the use of thematic learning and separated learning. The establishment of such teacher group has been in accordance with the opinion by the lesson study team (2007, p.15) which stated that grouping teachers in the implementation of school based-lesson study in an elementary school can encourage the system of subject teacher group or of classroom teacher group. This grouping or categorization can be adjusted to the conditions of each school especially in relation to the number of teachers.

In this academic year, the school based-lesson study in SDN 1 Kretek was implemented in 14 meetings by the Grade 1 to the Grade 6 teachers and the teachers of Islamic Education. This program was scheduled to be effective from March to May 2015. In the open class schedule, each teacher was planned to perform the open class activities once in a year. The school based-lesson study in this state

elementary school was focused on the following subjects: Mathematics, Natural Science, Islamic Education, and thematic learning. These conditions have been in accordance with the characteristics of a school based-lesson study that have been proposed by Masaaki (2012, pp. 3–4) in which it is stated that lesson study is an opportunity for teachers to attain knowledge regarding the subject materials so that all teachers should open their class at least once in a year. The school-based lesson study is a cross-subject or a cross-classroom lesson study. This statement implies that the Grade 1 teachers can observe the learning activities in the other grades and vice versa. Similar opinion has also been provided by Lewis & Colledge (2013, p. 3) who state that teachers in elementary schools on each grade can plan and implement one until three times of lesson study in each year using the research themes that have been set, been observed, and been discussed by all teachers and administrators in the schools. The intensity on the lesson study implementation by each teacher certainly should be adjusted to the conditions and the situations of the schools that implement the related school based-lesson study.

Evaluation of the Lesson Study

Program evaluation is an activity that is intended to identify how far the success of the activities that have been performed is attained. The evaluation of the school based-lesson study in SDN 1 Kretek was performed in order to identify how far the program had been run, to identify the program effectiveness, and to identify the weaknesses of the program implementation as a note for the lesson study implementation in the future.

The lesson study evaluation in SDN 1 Kretek was conducted by the teachers and the school based-lesson study team. The evaluation did not involve the external evaluators; instead, the evaluation only involved the school's internal evaluators. Arikunto & Jabar (2009, p. 22) mentioned these evaluators as the internal evaluators; the evaluation was conducted by the program evaluation officers who were the executors of the program under evaluation. The strength of the internal evaluator was that teachers as the internal evaluators completely understood the programs that would be evaluated so that the program evaluation would hit the target and the school did not need to spend huge fund for this evaluation.

The evaluation of lesson study in this state elementary school was conducted by the teachers after they had done performing the open class activities. The reflection activities were selected as one of the evaluation forms toward the lesson study in order to gather feedback from the observers. The objective of this evaluation was gathering the information, the development, and the progress of the students' learning process as well as the effectiveness of the teachers' learning process. After the teachers implemented the lesson study, the model teachers submitted an oral and a written report to the lesson study team or to the principal. The model teachers reported all matters that were related to the implementation of the lesson study in their classrooms, including the obstacles, so that the lesson study team could gather overall information about the lesson study implementation.

Another form of evaluation that the school had conducted toward the lesson study was the overall evaluation by the lesson study team. The teachers held a special meeting for discussing the lesson study that had been implemented within one academic year. Based on the results of this evaluation, the lesson study team could create a new plan that might be a follow-up solution for revising the quality of the next lesson study implementation. This evaluation was conducted in order to monitor how far the impact of the school based-lesson study that had been implemented to the learning quality in the classroom and the improvement of the teachers' professionalism.

In this evaluation, the team evaluated the lesson study that had been performed by each teacher, evaluated the program plan, and also reflected and revised the program. The results of this evaluation would be turned into the feedback on the school based-lesson study implementation in the next year. Based on the results of this evaluation, the school based-lesson study team of SDN 1 Kretek could create a better program of lesson study that might be implemented in the future years.

Based on the above explanation, it can be concluded that SDN 1 Kretek will continue the implementation of the school based-lesson study program in the upcoming academic years. This program will be continued by referring to the implementation of the previous year school based-lesson study program. This statement is in accordance with the opinion by Arikunto & Jabar (2009, p. 22) who state that there are four

possible policies that can be implemented based on the results of a program evaluation namely terminating the program, revising the program, continuing the program, or disseminating the program.

Conclusions

Based on the above explanation and the discussions in the previous section, the researchers would like to draw several conclusions on the implementation of school-based lesson study in SDN 1 Kretek. The conclusions that will be presented are the answers to the research problems that have been formulated. The conclusions, then, are as follows.

First, the school based-lesson study in SDN 1 Kretek was planned at the beginning of 2014/2015 Academic Year through the establishment of school based-lesson study team. This team has been assigned to plan the programs, to execute the programs, and to evaluate the programs of the school based-lesson study in this state elementary school.

Second, the school based-lesson study in this state elementary school was conducted in three stages namely *Plan*, *Do*, and *See*. In the Plan stage, the model teachers design the lesson plans and the other learning support instruments in collaboration with the classroom teachers under the same level and ask for feedback from the principal and the other teachers. Then, in the Do stage the model teachers perform the open class activities according to the schedule that has been set. In the learning activities, the model teachers emphasize the collaborative learning by forming heterogenous learning groups in terms of the students' capacities in one group. The observers in the open class activities are the teachers of SDN1 Kretek who are not teaching during these activities. In addition, in executing the lesson study this state elementary school is in collaboration with the UPT-PPD of Kretek District and the teachers in Cluster 01 of Kretek District. Last but not the least, in the See stage the results of reflection in the open class lesson study will be presented by the model teachers after the open class activities have been done and by the lesson study team at the end of the academic year.

Third, the school based-lesson study in SDN 1 Kretek has been evaluated by the model teachers after the end of the open class activities and by the lesson study team at the end of the academic year. The model teachers conduct the

evaluation based on the results of the reflection and report these results to the lesson study team or to the principal under the oral and written manner. On the other hand, the lesson study team evaluates the school based-lesson study by viewing the program implementation in overall within the scope of SDN 1 Kretek. At the end of the school year, the school based-lesson study team holds a meeting to evaluate the lesson study.

In relation to the conclusions, the researchers would also like to propose several suggestions regarding the implementation of the school based-lesson study in SDN 1 Kretek. The suggestions are as follows. First, SDN 1 Kretek is expected to always maintain the culture of lesson study by implementing the lesson study program in each academic year. Second, the state elementary school should allocate the budget of the lesson study into RKAS or the School's Budget and Activity Plan. The school may allocate a specific budget for the implementation of lesson study program through the Revised Plan or in the upcoming academic year. The budget of lesson study may also be allocated from BOS or the School's Operational Fund on the standards of educators and education by arranging a specific post on the Plan. Third, in the reflection activities both the model teachers and the observing teachers should present and discuss the phenomena or the events that have occurred in more detailed and in-depth so that they can find the causes and the better solutions to these phenomena or events. Fourth, for the future implementation of the school based-lesson study program within SDN 1 Kretek the lesson study is expected to be effective at the beginning of the academic year specifically from the semester 1. Fifth, in the lesson study evaluation the school should establish and maintain cooperation with experts and universities as the sources or the coordinators in order to improve the lesson study quality. Sixth, in order to increase the success rate of the lesson study implementation the school should hold routine seminars, training programs, and workshops regarding the lesson study in order that all school members understand better the essence of the lesson study implementation and that the activities of the school based-lesson study will can bring about positive impacts to teachers and their learning process.

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