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The Role of Lesson Study in Guiding Implementation of Learning in Elementary School

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ABSTRACTS

The aim of this Lesson Study was to improve teacher professionalism, so Lesson Study becomes one of alternative solutions in learning. Improving the quality of education must be made to achieve national education goals. Literature review and observation result about implementation of learning in the class as a method that used in this article. Lesson Study (LS) is the development of the teaching profession through the study of collaborative and sustainable learning based on the principles of collegiality and mutual learning to build learning community. Lesson Study provides a process to collaborate and design lesson and evaluate strategic success. Teaching strategy that already implemented as an effort to improve process and students' learning gains. Teacher cooperates to plan, teach, and observe the learning that is developed cooperatively. This article will discuss related to its history, until the steps of its implementation.

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1. INTRODUCTION

The learning process that occurs in the classroom and outside the classroom is a dynamic condition (Malik and Rizvi, 2018). The interaction teacher and students with the material and teaching material delivered tends to bring about diverse responses. Learning objectives are expected to be achieved, but instead of being achieved, many obstacles in the field relate to learning. Concrete examples of problems in the field include: monotonous learning, one way communication, teacher centered, which ultimately often leads to boredom in students, students are not focused, and cannot understand the material that conveyed by the teacher. Other things based on the findings in the field obtained data about the distribution of teacher and student books from the District Education Office of Banyumas is not streamlined so the learning process is hampered. This shows the dependence of schools on books issued by publishers through the distribution of District Education Office. If there is a delay, the school has not been able to anticipate the problem so that there is irregularity in the learning process; the existence of learning and assessment tools that are still floating (Morris and Trivedi, 2008). This condition will certainly be something bad for the world of education, because the learning process aimed at achieving quality education is still far from expectations. Especially when the monitoring from the principal and other elements is lacking, the class also seems to be without rules.

Various training or workshops participated by teachers to improve the quality of learning did not have much impact (Colbert et al., 2008). The learning process is still proceeding as usual without any significant changes, because the training and workshops have fulfilled the task. This condition certainly does not benefit various parties, especially teachers, students, and the world of education itself. If correlated with 21st century learning because Lesson Study learning is a learning improvement activity, it was originally developed in Japan, and is currently being developed in various regions in Indonesia (Akyüz et al., 1998). Lesson study is a model of coaching (training) the teaching profession through the study of collaborative and sustainable learning based on the principles of collegiality and mutual learning so that a learning community can be built. Lesson studies are called Continuing Professional Development and uphold the principle of continuous improvement. With the plan, do and see stages, so lesson study is believed to improve teacher professionalism (Suratno, 2012).

Lesson Study (LS) is the guidance of the teaching profession through collaborative and continuous study of learning based on the principles of collegiality and mutual learning to build learning communities (Handayani et al., 2019). Lesson study provides a process for collaborating and designing lessons (learning) and evaluating strategic success. Teaching strategy that has been applied manifested as an effort to improve student learning processes and gains. The teacher works together to plan, teach, and observe a learning that developed cooperatively. The Main Objectives of Lesson Study: Increase knowledge about teaching material, Increase knowledge about learning, Increase the ability to observe learning activities, Improve collegiality relationships, Improve the relationship between the implementation of daily learning with long-term goals that must be achieved, Increase learning motivation, both teachers and students to always develop, improve the quality of learning plans (Faiz, 2020; Wirawan et al., 2018).

Lesson study is an activity to improve learning, originally developed in Japan, and currently developed in various regions in Indonesia. Lesson study is a model of coaching (training) the teaching profession through the study of collaborative and sustainable learning based on the principles of collegiality and mutual learning so that a learning community can be built. Lesson studies are called Continuing Professional Development and uphold the principle of

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continuous improvement. With the plan, do and see stages, so lesson study is believed to improve teacher professionalism.

The learning process that has been practiced by many teachers in the class only relies on the mastery of basic skills or procedural abilities that emphasize more on memorization, prioritizing the final outcome of the process (Turner and Martinek, 1995). Some things that cause this condition occur because of the teacher's perception related to learning media. The teacher thinks that learning media is a very expensive and difficult tool to make. By carrying out lesson study, the teacher's insights will develop and be motivated to always innovate which in turn will become a professional teacher (Gitlin and Margonis, 1995).

The development of teacher knowledge about teaching and learning material occurs at the moment when the learning implementation is now through observation. Student responses will be more deeply known by the teacher as an observer, various background knowledge of the observer will also make more variations in the results of his observations. In short, lesson study activities can bring many benefits including increasing teacher knowledge about teaching and learning materials, student learning activities, strengthening collegiality relationships between teachers and with observers other than teachers. This will be able to increase teacher motivation. With high motivation to always develop in teachers will be able to improve the quality of learning (including teaching materials and teaching material / hand on) and learning strategies. Finally, it leads to professional improvement (Mulyana, 2014; Supriatna, 2013).

Lesson studies began to be socialized in the education environment of Banyumas district since 2006, but not all schools have conducted Lesson Study activities. This is due to among others: a) there is no specific funding for these activities, b) confidence in the benefits of Lesson Study can increase the effectiveness of learning is still lacking. However, based on experience and limited observations in the implementation of learning it is known that teachers only abort their obligations as instructors, in fact there are some schools that have teachers not in accordance with the field of study they teach (Rothi, Leavey and Best, 2008).

This condition also occurred in Karang Turi State Elementary School located on Karang Turi Street, Sumbang sub-district, Banyumas has 137 students consisting of 6 classes and 6 classrooms. 1 teacher's office room integrated with the principal's office, 1 library and sports room, 1 UKS room, 1 mosque that is still in the completion stage. The yard owned by the school is large enough so that it can be used as a playground and sports. Karang Turi Elementary School is managed by 6 educators, with all academic qualifications for class teachers. Based on the above problem, the community service team of UMP together with partners namely Karang Turi State Elementary School agreed to hold socialization on the implementation of Lesson Study to improve teacher professionalism.

2. LITERATUR REVIEW

2.1. History of Lesson Study

Japanese Lesson Study "Jugyokenkyu" which is a combination of two words namely jugyo which means lesson or learning and kenkyu which means study or study. Thus Lesson Study is a study or study of learning (Damayanti, 2019). Lesson Study is not a strategy or method of learning, but it is one of the ways of coaching to improve the learning processes and outcomes of a group of teachers collaboratively and continuously based on the principles of collegiality and mutual learning in planning to build a learning community.

Lesson Study is an ongoing activity that is unrelenting and an attempt to apply the principles of Total Quality Management, which is to improve the process and results of

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student learning continuously, based on data (Babbar, 1995). Lesson Study is an activity that can support the formation of a learning community that consistently and systematically makes improvements, both at the individual and managerial level. Through Lesson Study activities teachers study learning through joint planning and observation which aims to motivate students to actively learn independently (Cerbin and Kopp, 2006). In addition, each member of the community involved will probably be able to do self-development so that they have the independence to develop together with other members of the learning community.

The history of Lesson study has been developing for quite some time in Japan, since the early 1900s. This learning activity becomes a medium for teachers in Japan to study, study, and observe learning through joint planning and observation aimed at motivating their students to learn more actively and be more able to learn independently.

Lesson study activities can be carried out by groups of teachers in a district (province) or conducted by groups of teacher groups, such as MGMP in Indonesia (Suratno, 2012). The implementation technique is a group of teachers from several schools gathered to carry out lesson study. Konaikenshu or Lesson study was very popular in Japan after it was held by a school and developed since the early 1960s. Etymologically, konaikenshu comes from two words, namely konai which means school and kenshu which means training. The term konaikenshu or kenkyujugyo can mean school based in service training or in-service education within the school or in-house workshop.

In the 1970s the Japanese government felt the benefits of this konaikenshu activity, and since then schools in Japan were supported in the provision of costs and incentives by the government to routinely carry out these activities to improve education. Elementary and junior high schools are schools that carry out many konaikenshu activities (Shimahara, 1998). Interestingly, although the Japanese government has provided funding and incentives for schools that carry out this activity, but because the benefits obtained from these activities are large, most of these schools do so voluntarily.

Another reason why konaikenshu or lesson study is so popular in Japan, this is because lesson study is very helpful for teachers. The tendency of lesson study to spend a lot of time is not a barrier for teachers to implement it (Angers and Machtmes, 2005). The enormous benefit in the form of valuable information to improve their teaching skills is one of the main factors

The following are the statements of three teachers and one school principal in Japan.

"... I think the best experience from lesson study is that lesson study gives you the opportunity to reflect and rethink how you teach. ..... Although in a short time the teachers meet to discuss learning seriously, this is a very valuable experience. I think experience (carrying out lesson study) gives us the opportunity to build good friendships among teachers. I think strong friendships can be built when teachers meet and seriously think about what we do, teach ... In other words lesson study can help teachers strengthen friendship, I think it is very important for all teachers. Also the on-the-job-problem-solving process (lesson study) requires the seriousness, intensity, and responsibility of the teacher as a professional, because something you try to do in school always affects students. Work environment, this serious feeling is a benefit of professional development in schools. The quality of konaikenshu activities varies greatly depending on the caliber of school leadership, the quality of teachers to develop, strengthening the friendship between them, and their willingness to carry out konaikenshu" (Cerbin et al., 2006). Furthermore, a school principal explains the implementation of the Lesson Study as follows:

"Of course we think that implementing konaikenshu is important but I cannot say that all schools carry out konaikenshu very well when I think about the quality of training ... How you

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make konaikenshu useful depends on the leadership and togetherness of the teachers in the school (Wood and Cajkler, 2018).

2.2. Development of Lesson Study in America and Europe

The Third International Mathematics and Science Study (TIMSS) is a study comparing the achievement of learning outcomes of Mathematics and Natural Sciences grade 8 (2 SMP). The spread of lesson study in the world in 1995 was motivated by TIMSS. Forty-one countries were involved in TIMSS, twenty of the forty-one countries obtained significantly higher mathematical average scores than the United States. Countries that have obtained higher math scores than the United States include Singapore, Korea, Japan, Canada, France, Australia, Hungary and Ireland. While only 7 countries that significantly have lower math scores than the United States, namely Lithuania, Cyprus, Portugal, Iran, Kuwait, Colombia, and South Africa.

The position of mathematics learning achievement of second grade junior high school students in the United States made the country conduct comparative studies of mathematics learning in Japan and in Germany (Ma, 2008). The team from the United States recorded video learning mathematics in Japan, Germany and the United States to do an analysis of the learning video. At that time, the United States Team realized that the United States did not have a system to improve the quality of learning, while Japan and Germany continued to improve the quality of learning. The United States always reforms but does not improve quality. Furthermore, US education experts learned from Japan about lesson study. Now lesson study has developed in schools in the United States and it is believed that lesson study is very potential for the development of professionalism of educators that will have an impact on improving the quality of education. In addition, lesson study has also developed in Australia (Lewis, et al., 2006).

2.3. Lesson study in Indonesia

IMSTEP (Indonesian Mathematics and Science Teacher Education Project) became a medium for developing Lesson study in Indonesia that was implemented since October 1998 in three IKIP namely IKIP Bandung (now known as Universitas Pendidikan Indonesia, UPI), IKIP Yogyakarta (now named Yogyakarta State University UNY), and IKIP Malang (now called Malang State University UM), in collaboration with JICA (Japan International Cooperation Agency).

Improving the quality of mathematics and science education in Indonesia becomes a general goal of IMSTEP. Meanwhile, the specific aim is to improve the quality of mathematics and science education in three IKIP namely IKIP Bandung, IKIP Yogyakarta, and IKIP Malang. The initial implementation of IMSTEP, UPI, UNY, and UM were respectively named IKIP Bandung, IKIP Yogyakarta, and IKIP Malang (Depdiknas and JICA, 2009). Quality improvement is focused on pre- and in-service education in the three Faculties of Mathematics and Natural Sciences (FPMIPA) from IKIP Bandung, IKIP Yogyakarta, and IKIP Malang.

Some of the activities designed to achieve these objectives include revising the syllabus of pre- and in-service programs, developing textbooks with 3 universities, developing practicum activities, and developing teaching materials. To support these activities, the Japanese government through JICA provided support in the form of buildings and their facilities for IKIP Bandung while laboratory facilities for IKIP Yogyakarta and IKIP Malang. In addition, JICA provided support in the form of providing Japanese experts and training in Japan for UPI, UNY, and UM lecturers. Ten UPI, UNY, and UM lecturers attend training in Japan each year to get

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to know the education system in Japan and learn to develop digital teaching materials. Japanese experts Prof. Dr. Kanzawa and Mr. Higa successively acted as chief adviser and project coordinator at the time. In March - April 2001, the JICA team from Japan conducted a mid-term evaluation to find out the progress of IMSTEP.

The results of the JICA evaluation show that IMSTEP is running as expected and can be continued for the next two and a half years by adjusting the program through additional activities. Activities added to IMSTEP are "Piloting" activities. The piloting activity aims to develop innovative learning of mathematics and science in schools collaboratively between middle / high school teachers and F (P) MIPA lecturers from UPI, UNY, and UM. Japanese experts assigned to the period 2001-2003 are Prof. Dr. Tokuda and Mr. Nakatsu, who subsequently acted as chief adviser and project coordinator, continued the work of Prof. Dr. Kanzawa and Mr. Higa.

Piloting activities were chosen by 4 schools (2 junior and 2 senior high schools) in each city in Bandung, Yogyakarta and Malang. The selected schools are schools that are close to the UPI, UNY, and UM campuses whose quality is at a moderate level based on NEM but these schools show a desire and commitment to progress. Furthermore, the schools assigned mathematics, science and physics, and biology teachers to junior high school while mathematics, physics, and biology and chemistry teachers to senior high school (Russel and Atwater, 2005). Lecturers and teachers in the field of study conducted several workshops to discuss the problems faced by teachers in schools and design learning models as a solution to the problems found. The learning model developed is based on hands-on activity, daily life, and local materials. After teaching materials made from local materials are tested in a laboratory, the learning model is tested in class by the teacher while the lecturer becomes the observer.

Teachers and lecturers have been able to develop teaching materials made from materials around students and conduct hands-on activity and daily life-based learning to explain mathematical concepts and natural sciences so that students become happy learning mathematics and science. Teachers involved in piloting become motivated to innovate in learning and feel close to the lecturer to obtain information when facing difficulties in innovating learning (Beichner, et al., 2007).

It is unfortunate, teachers who are involved in piloting activities are very limited to one teacher per field of study per school so that the dissemination of valuable experiences in developing learning innovations is not going well even in one school, and moreover the principal is not directly involved in piloting activities. Costs for piloting activities come from matching funds managed by the university. Lecturers and teachers obtain transportation funds even though the amount is very small (Morrison, George and Mosqueda, 2008).

In July 2003, a team from JICA (Japan) conducted an evaluation of the project's performance and visited the school to witness learning activities at the school. JIC Team A concluded that piloting activities based on hands-on activity, daily life, and local materials have the potential to improve the quality of learning in schools.

Furthermore, the JICA team recommended continuing the IMSTEP Program Follow-up for 2 years. IMSTEP Follow-up Phase (2003-2005). UPI FPMIPA, FMIPA UNY, and FMIPA UM implemented the IMSTEP Follow-up program from October 2003 to September 2005 which aimed to improve the quality of in-service teacher training and the quality of education for prospective teachers (pre-service teacher training) in mathematics and science at UPI, UNY, and UM. Dr. Eisuke SAITO and Isamu KUBOKI respectively as chief advisers and coordinators helped guide the three universities to implement the IMSTEP Follow-up. The IMSTEP Follow-

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up Program is expected to produce an in-service teacher training model and a pre-service teacher training model in the field of Mathematics and Natural Sciences.

As a form of sustainability of the collaboration program, the headmaster facilitates Lesson Study activities by empowering the MGMP in the school and carrying out Lesson Study activities in rotation from subject to other subjects. The principal also engages in learning observation activities and guides discussions to reflect on learning. Now the Lesson Study activities do not only belong to MIPA teachers but non-MIPA teachers also conduct Lesson Study activities. For example, SMAN 9 Bandung has conducted Lesson Study Biology, Civic Education, Sociology, and Indonesian activities in the even semester 2005/2006. Discussion about the sustainability of the collaboration program in theesson Study activity was also conducted with the mathematics MGMP and IPA board in Bandung.

As a follow up, several workshops on Lesson Study have been held for MGMP in the southeast, east and west of Bandung. MGMP IPA Middle School in the western city of Bandung has followed up the Lesson Study workshop with the preparation of the design and development of learning models based on hands - on activity, daily life, and local materials. Furthermore, the MGMP of Natural Sciences in the western region of Bandung in the even semester of 2005/2006 implemented the learning model in Miftahul Iman Middle School, 12th Bandung Middle School, UPI Lab School Middle School, 29th Middle School, Bandung, and YWKA Middle School. Lesson studies originated from Japan which is used to improve the professionalism of teachers. Japan's success in education has made education experts in the United States and European countries and Australia learn lesson study from Japan (Seleznyov, 2018).

There are various definitions of learning studies (Lesson Study) written by experts. (Lewis, 2002) states "lesson study is a cycle in which teachers work together to consider their long-term goals for students, bring those goals to life in actual" research lessons ", and collaboratively observe, discuss, and refine the lessons". According to Lewis the ideas contained in the CB are actually short and simple, namely if a teacher wants to improve learning, one of the most obvious ways is to collaborate with other teachers to design, observe and reflect on the learning done. In line with Lewis, said that Lesson Study is a model of teaching professional development through the study of collaborative and sustainable learning based on the principles of collegiality and mutual learning to build learning communities. A learning community is a group of people who exchange values or beliefs and learn from each other to increase their knowledge (Chen et al., 2009). So, the learning community in the context of education is a group of teachers, students, or school leaders who conduct mutual learning activities in an effort to improve the quality of learning and education in schools.

2.4. Understanding and Stages in Lesson Study

Lewis, C. Explaining about Lesson Study as a very effective method for teachers because it can provide benefits and opportunities for teachers to:

(1) think more carefully about goals, certain material that will be taught to students, (2) think deeply about learning goals for the future interests of students, for example about the importance of friendship, the development of perspectives and ways of thinking of students, as well as students' love for science, (3) studying the best things that can be used in learning through learning from other teachers (participants or participants in Lesson Study), (4) learning about content or subject matter from other teachers so that they can add knowledge about what should be given to students, (5) develop skills in teaching, both when planning learning and during learning activities, (6) building abilities through collegial learning, in the

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sense that teachers can learn from each other about what is felt still lacking, both in terms of knowledge and skills in learning students, and (7) develop "The Eyes to See Students" (kodomo wo miru me), in the sense that with the presence of observers (observer), observations about student learning behavior can be more detailed and clear.

The Lesson Study Project (LSP) meanwhile explains some of the other benefits that can be taken from Lesson Study, including: (1) teachers can document the progress of their work, (2) teachers can get feedback from other members / communities, and (3) teachers can publish and disseminate the final results of Lesson Study. In the context of education in Indonesia, this third benefit can be used as one of the Teacher Scientific Papers, both for the sake of promotion and teacher certification.

Regarding the implementation of Lesson Study, (Mulyana, 2007) the two types of Lesson Study, namely School-based Lesson Study and MGMP-based Lesson Study. School-based Lesson Study is carried out by all teachers from various fields of study with the principal concerned with the aim that the quality of the process and learning outcomes of all subjects in the school in question can be further improved. Whereas MGMP-based Lesson Study is an assessment of the learning process carried out by a group of specific subject teachers, with a deepening of the study of the learning process in certain subjects, which can be carried out at the regional, district level or may be further expanded.

Lesson Study Research Group from Columbia University in terms of groups suggested that there were only 3-6 people, consisting of teachers and principals, and other interested parties. Principals need to be involved primarily because of their role as decision makers in schools. With their involvement in Lesson Study, it is hoped that school principals can make important and appropriate decisions for improving the quality of learning in their schools, especially in subjects studied through Lesson Study. In addition, it can also invite other parties who are considered competent and have concern for student learning, such as school supervisors or experts from universities.

Types of Lesson Study, (Susilo, 2006) describes two types of Lesson Study, namely School-based Lesson Study and MGMP-based Lesson Study. School-based Lesson Study is carried out by all teachers from various fields of study together with the principal concerned so that the quality of the process and learning outcomes of all subjects in the school can be improved, while MGMP-based Lesson Study is an assessment of the learning process carried out by a group of teachers certain subjects with a deepening study of the learning process on certain subjects that can be carried out at the regional, district or maybe more broadly.

(Frick et al., 2006; Susilo, 2006) on the other hand states that learning studies are a method of teacher professional development, which can be interpreted that lesson study learning studies are an assessment of the learning process in the classroom conducted by a group of teachers in collaboration for a long time and continuously to improve his professionalism. Through learning studies, teachers collaborate (work together) to assess how to plan learning, carry out the learning process in class and then conduct reflection discussions to get feedback in order to improve the next learning process.

So, in the learning study the teachers not only examine by giving treatment and then observing its impact on students, but want to change the learning process into an effective learning process, by observing and collecting data, then seeing how it impacts, and then revising the learning plan to do another review.

The Characteristics of the Lesson Study, Catherine Lewis revealed the essential features of the Lesson Study that she obtained based on observations of several schools in Japan, namely:

(i) A common goal for the long term. Lesson Study is preceded by an agreement from the teacher about the shared goals to be achieved in the long term with a broader scope of

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objectives, for example the development of student academic abilities, the development of individual student abilities, the development of enjoyable learning, etc.

(ii) Important subject matter. Lesson Study focuses on material that is considered important and becomes a weak point in student learning and is very difficult for students to learn

(iii) Carefully study students. The main focus of Lesson Study is the development and learning of students, for example, whether students show interest and motivation in learning, how students work in small groups, how students do the tasks given by the teacher, as well as other related matters with the activities, participation, and conditions of each student in following the learning process

(iv) Observation of direct learning. Direct observation is arguably the heart of Lesson Study. To assess the development and learning activities undertaken by students, it is not enough just to look at Lesson Plans or only see video shows, but also to observe directly the learning process. By making direct observations, the data obtained about the learning process will be far more accurate and complete, even to the point where even the details can be extracted. The use of videotapes or recordings is used only as a supplement rather than as a substitute.

The stages in Lesson Study Learning are as follows:

(i) (Ibrohim and Syamsuri, 2008) that Lesson Study is carried out through four stages using the concept of Plan-Do-Check-Act (PDCA).

(ii) Slamet Mulyana (2007) suggests three stages in Lesson Study, namely: (1) Planning (Plan); (2) Implementation (Do) and (3) Reflection (See).

(iii) Bill Cerbin and Bryan Kopp from the University of Wisconsin present six stages in Lesson Study, namely:

Form a Team: form a team of 3-6 people consisting of the relevant teacher and other parties who are competent and have an interest in Lesson Study.

Develop Student Learning Goals: team members discuss what students will learn as a result of Lesson Study.

Plan the Research Lesson: teachers design learning to achieve learning goals and anticipate how students will respond.

Gather Evidence of Student Learning: one of the team teachers conducts learning, while another observes, gathering evidence from student learning.

Analyze Evidence of Learning: the team discusses results and assess progress in achieving student learning goals

Repeat the Process: the group revises the learning, repeats the stages starting from the 2nd stage to the 5th stage as stated above, and the team shares the findings.

3. FINDING AND DISCUSSION

By referring to the thinking of (Yuwono, 2009) and the concept of Plan-Do-Check-Act (PDCA), below will be explained briefly about the four stages in organizing Lesson Study:

3.1 Planning Stage

In the planning stage, teachers who are part of Lesson Study collaborate to develop lesson plans that reflect student-centered learning. Planning begins with the activity of analyzing the needs and problems faced in learning, such as: basic competencies, ways to teach students, anticipating the lack of learning facilities and facilities, and so on, so that they can know the various real conditions that will be used for learning purposes. Furthermore, together also

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find solutions to solve all problems found. The conclusion from the analysis of needs and problems becomes a part that must be considered in the preparation of the lesson plan, so that the lesson plan becomes a very mature plan, in which it is able to anticipate all possibilities that will occur during the learning process, both in the initial, core and up to with the final stages of learning.

3.2 Doing Stage

In the second stage, there are two main activities, namely:

(1) Learning implementation activities carried out by one of the agreed teachers or at their own request to practice the lesson plans that have been prepared together, and (2) Observation activities carried out by other Lesson Study members or communities (read: teacher, head school, or school superintendent, or other invitee who acts as an observer).

Some things that must be considered in the implementation stage, including: Teachers carry out learning in accordance with the lesson plans that have been prepared together (Sari, 2018). Students are endeavored to be able to undergo the learning process in a reasonable and natural setting, not under pressure due to the Lesson Study program.

During learning activities take place, observers are not allowed to interfere with the course of learning activities and interfere with the concentration of teacher and student. The observer conducts careful observations of the interaction of students, student-teaching materials, student-teacher, other student-environment, using observational instruments that have been prepared previously and arranged together (Baker et al., 2010).

Observers must be able to learn from ongoing learning and not to evaluate teachers. Observers can record through a video camera or digital photo for the purposes of documentation and further analysis of the material and recording activities do not interfere with the learning process. The observer makes notes about student learning behavior during the learning process, for example about student comments or discussions and is attempted to include the name of the student concerned, the process of constructing student understanding through student learning activities. Notes are made based on the guidelines and sequence of student learning experiences listed in the lesson plan (Lehman, D'Mello and Graesser, 2012).

3.3 Checking Stage

The third stage is a very important stage because efforts to improve the subsequent learning process will depend on the sharpness of the analysis of the participants based on observations of the implementation of learning that has been carried out. Reflection activities are carried out in the form of discussions that are followed by all Lesson Study participants who are guided by the principal or other designated participants.

The discussion starts from conveying the impressions of teachers who have practiced learning, by conveying comments or general impressions as well as specific impressions of the learning process they do, for example regarding the difficulties and problems felt in carrying out the lesson plans.

Furthermore, all observers convey responses or suggestions wisely to the learning process that has been carried out (not to the teacher concerned). In presenting their suggestions, observers must be supported by evidence obtained from observations, not based on their opinions (Seaman, 1999). Various discussions that develop in the discussion can be used as feedback for all participants for the sake of improving or improving the learning process.

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Therefore, all participants should also have notes of the conversation that took place in the discussion.

3.4 Acting Stage

From the results of reflection can be obtained number of new knowledge or important decisions for the correction and improvement of the learning process, both individual and managerial (Konradt et al., 2015). At the individual level, various valuable findings and input delivered during the discussion in the reflection stage (check) certainly become a capital for teachers, both those who act as instructors and observers to develop the learning process towards a better direction.

At the managerial level, with the direct involvement of the principal as a participant in the Lesson Study, the principal will naturally receive a number of valuable inputs for the benefit of developing management of education in the school as a whole (Sebele, 2010). If so far the headmaster is preoccupied with things outside of education, with his direct involvement in Lesson Study, then he will be better able to understand what is actually experienced by the teacher and students in the learning process, so hopefully the principal can be more focused again to realize itself as an educational leader in schools.

4. CONCLUSION

Lesson Study is not a model or method of learning, but as a medium or effort that can be used to improve quality in the learning process. Lesson study can be done by teachers by involving observer (anyone) who is concerned about education. One effort to introduce Lesson Study by involving teachers in primary school training, through the creation of learning tools that are considered suitable with certain studies / material, with colleagues and training teachers can carry out learning in groups. It is expected that elementary school teachers can learn and be able to understand about Lesson Study for the achievement of educational goals, as well as part of ongoing professional improvement programs. Legal Foundation the information provided in this activity is from PP no. 74 in 2008 concerning teachers. In this regulation the teacher hopes to always improve his profession. The activity that can be done is by training Lesson Study in an effort to develop the ability of the teacher's role to play an active role always increasing his pedagogical abilities.

5. RECOMMENDATION

Lesson study in the learning process can be done many times to achieve the expected learning quality. Plan-do-see as stages in lesson study can be carried out by teachers collaborating (working together) to assess how to plan learning, carry out the learning process in class and then conduct reflection discussions to get feedback in order to improve the next learning process. So, in the learning study the teachers not only examine by giving treatment and then observing its impact on students, but want to change the learning process into an effective learning process, by observing and collecting data, then seeing how it impacts, and then revising the learning plan to do another review.

The main objectives of Lesson Study include: 1) Increasing knowledge about teaching materials, 2) Increasing knowledge about learning, 3) Increasing the ability to observe learning activities, 4) Improving collegiality relationships, 5) Improving the relationship between the implementation of daily learning with long-term goals length to be achieved, 6)

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Increase learning motivation, both teachers and students to always develop, 7) Improve the quality of learning plans.

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