

QUALITY OF TEACHER'S REFLECTION BASED ON INSTRUMENT CATEGORIES AND LEVEL OF REFLECTION ON LESSON STUDY ACTIVITIES AT SD GAGASCERIA

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Abstract: Reflection becomes an important moment in lesson study because there is a pause with the process that has occurred to review the learning activities that have been carried out. This has an impact in determining the next follow-up in designing learning. This reflection stage is very important because efforts to improve the next learning process will depend on the sharpness of the analysis from participants' reflection. Reflection activities are carried out in the form of discussions which are followed by all lesson study participants guided by the principal or other appointed participants. The purpose of this study is to analyze the quality of reflection in post lesson discussions at SD Gagasceria so that it will affect the next learning design based on the learning process obtained by each participant. The research was conducted at SD Gagasceria using qualitative methods based on data analysis of post lesson discussion documents during lesson study in the 2018-2019 school year and 2020-2021 school year. Lesson study activities were carried out in 3 different classes attended by the teachers of SD Gagasceria. The reflection analysis instruments used are categories and levels designed to measure post-learning reflection from Ono (2013). Based on the results of the analysis of the post lesson discussion notes, there is a change in the level of reflection in 2019 and 2021. In 2019, the teacher's reflection level at Gagasceria is at level 1, which describes data and facts in general. In 2021, the teacher reflection level at Gagasceria increases to level 2 by 24%. At level 2, in addition to conveying the data and facts obtained, the possible background or reasons were also explained. This reflection analysis can be a reference in improving the quality of subsequent learning and developing teacher professionalism.

Keyword: categories and levels of reflection, lesson study, reflection

INTRODUCTION

One of the teacher's roles is as an evaluator. At a certain time the teacher will evaluate and assess the results that have been achieved by students, both cognitive and non-cognitive. The purpose of the assessment carried out by the teacher is to determine the mastery of students' understanding of the lesson, as well as the accuracy or effectiveness of teaching methods. When the teacher evaluates, there is a process of reflection on the activities or actions that have been carried out previously. This is intended to determine whether the planned goals have been achieved or not, the material taught is appropriate, the students' thinking processes, the dialogue built in the classroom. Through reflection, the teacher can find out the success and improvements that need to be made in the next lesson.

One approach to develop teacher reflection ability is through lesson study. In lesson study, reflection becomes an important moment because self-awareness is built between the stimulus (learning) that has been done and the response (follow-up) that will be given. That's when the teacher can rethink what choices can be made, the background for making choices, the consequences that will occur when a decision is made for the next follow-up/response. This is a space to grow and learn so that learning gets better so that a student profile can be achieved.

In the implementation of lesson study, there are three phases that are carried out, namely planning (plan), implementation of learning (do), and reflection (see). According to Yumiko Ono (2013), the main elements of lesson study are collaborative design of learning or the material being studied, implementation of the design by observing, and reflecting on learning design with the aim of improving teaching and learning activities. This cycle of reflection leads to collaboration in improving learning design.

During reflection during post lesson discussions, comments on how lessons can be improved should be very specific and accompanied by clear recommendations. During the post lesson discussion discussion, the activities are guided by the facilitator to manage the discussions that occur. The facilitator should not allow a discussion that criticizes the model teacher; focus on the learning in progress – the lesson belongs to the group. When suggestions are given by observers, it aims to improve group learning, not only for model teacher classes (Ono, 2016).

According to Sato (2012) in lesson study there are two sides of teacher development, namely as an expert and as a professional. It is important to form a teacher learning community in schools. As a professional, lesson planning and reflection during lesson study is a place to learn from each other and accelerate each other's growth in carrying out learning tasks. This reflection stage is a very important stage because further efforts to improve the learning process will depend on the sharpness of the participant's analysis based on observations of the learning implementation. Reflection activities are carried out in the form of discussions which are followed by all lesson study participants guided by the principal or other appointed participants.

Reflection based on lesson study observations is an intellectual activity carried out in group collaboration through discussions between participants and observers. The aim is to explore ways to improve the quality of student learning in the future in designing learning, choosing teaching materials to be used, and learning methods to be carried out (Ono, 2013).

To determine the quality of reflection, an instrument is needed that can measure the improvement in the quality of reflection during lesson study. One of the instruments that can be used is the category and level of reflection which refers to the journal *How Reflective are Lesson Study Discussion Sessions? Developing an Instrument to Analyze Collective Reflection* from Yumiko Ono in 2013. In his journal, Ono (2013) explains that to improve the quality of teacher reflection, there are two categories that are the focus, namely the category of reflection observed during lesson study and the level of reflection from the responses or comments made. given during the post lesson discussion. Based on the reflection category, it can be seen that the teacher's focus when making observations in class such as teaching and learning strategies, student behavior, student dialogue, learning objectives and curriculum, logistics, teacher behavior. When observers provide feedback/comments, it can be seen whether the level of reflection provided only describes the data, has provided reasons, included solutions, or linked them to theories that support their responses.

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This instrument can help to find out which categories are considered by the observer or not and to know the quality of the reflection delivered. At the time of reflection, the teacher together find out the needs of the child in learning or what are the obstacles, causes of obstacles/successes, and strategies that can be done at the next meeting. Data analysis of post lesson discussion discussions can be used to determine the ability of teachers to reflect on learning activities, whether teachers know the root of the problems that occur in the class or the potential of the class so that the steps taken are based on the development goals.

Based on the results of the reflection on lesson study activities carried out in the 2018-2019 school year, the category and level of reflection during the post-lesson discussion for the teachers of SD GagasCeria was that most of the teachers discussed student dialogue and the level of reflection. is at level 1. Therefore, during lesson study in 2021, the quality of reflections that have occurred previously and expectations during lesson study activities in that year are shown . This becomes a reference in improving the quality of further learning and developing teacher professionalism.

METHOD

The study was conducted to identify the quality of teacher reflection during lesson study at SD GagasCeria using a qualitative descriptive method with data collection techniques to analyze individual performance and experience. Qualitative research using reflection data during post lesson discussion.

This research is based on the results of the reflection discussion on mathematics learning for grades 2, 3, and 4 for the 2018-2019 school year and Indonesian language lessons for grades 3, 4, and 5 for the 2020-2021 school year. The research was conducted in April 2019 and March 2021 at SD GagasCeria. This study involved teachers who made observations on lesson study of mathematics and Indonesian as well as model teachers from each class. The number of teachers who made observations in each class was 7-10 people, a total of 23 teachers. Lesson study 2019 was conducted before the pandemic, observers saw and observed learning activities directly in class. Before the learning activity took place, each observer who attended received a lesson plan document and an observation sheet. Observers do not intervene on students as long as the model teacher conducts the learning process. When conducting observations, it is recommended to do the following.

- Make a note of any comments or discussion conducted by students and do not forget to write the name or position of the seat student. Make a note of situations in which students cooperate or choose not to cooperate.
- Look for examples of how the construction process of understanding occurs through discussions and learning activities conducted by the students.
- Make a note of the variety of problem-solving methods of individual students or groups of students, including solving the wrong strategy.
- In addition to making notes about some important issues about student learning activities, an observer during the observation needs to pay attention or be guided by the following questions. Are the learning objectives clear? Do the activities developed contribute effectively to the achievement of these objectives?

Lesson study in 2021 will take place online. Planning is done online through a breakout room zoom meeting. Planning documents, including lesson plans, learning media, study sheets are stored using a shared drive that can be accessed by all teachers. In this lesson study, all agreed to observe the dialogue that occurred in the classroom, the students' thinking level, and learning patterns. In the current pandemic situation, the learning process as much as possible can continue to develop students' thinking processes and mutually supportive cooperation in the classroom community.

Before making observations, the observer will get a lesson plan from the model teacher. When making observations, the observer will observe the learning activities that have been planned by the model teacher and make notes on the observation sheet. The observation process is not as flexible as before. Observers can only observe students online, how learning patterns occur in the classroom, the dialogue process that occurs between students and teachers, students and students,

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and student responses to questions posed by the teacher. When using a breakout room, the observer will be able to observe more closely the process of dialogue and discussion that occurs between students, the questions that arise, the behavior that occurs during learning. Each teacher writes down their observations on the lesson study observation sheet. After learning is complete, reflection activities are carried out. Reflection activities are carried out immediately after learning is complete.

In the reflection activity, the discussion begins with the model teacher being given the opportunity to reflect on the learning that has been done. The model teacher expresses general and special impressions of the learning process carried out, for example what happens in the classroom according to expectations or the lesson plans that have been prepared, what events are not in line with expectations, and what has changed from the original plan. Next, the observer conveys the responses or insights he has received on the learning process that has been implemented. Observational submissions must be supported by evidence from observations, not opinions. Various discussions that developed in the post lesson discussion can be used as feedback for all participants for the benefit of improving the learning process. Therefore, all participants should also have notes of the conversation that took place in the discussion.

The discussion minutes after the lesson study were analyzed using category and level instruments designed to measure post-learning/reflection.

Table 1. Categories and Levels of Reflection Levels Designed to Measure Post-Learning/Reflection.

Level	Teaching and learning strategies; Instructional techniques and practices	Teacher behaviour; teacher characteristics; communication skills	Lesson as experienced by students; student learning; student behaviour; interaction between students	Achievement of lesson and curriculum objectives (e.g. thinking skills, creativity, conceptual understanding) ; inconsistency with objectives	Logistics; management; planning; use of materials and teaching aids
1	Descriptions of strategy or practice without a comment or suggestion. This includes long, detailed descriptions.	*Descriptions of teacher behaviour and/or characteristics without a comment or suggestion. This includes long, detailed descriptions.	* Descriptions of student experience/behaviour without a comment or suggestion. This includes long, detailed descriptions.	* Claim of achievement without comment, or if comment is present it is trivial and/or vague.	* Descriptions of action without comment, or with brief tagged on comment.

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	* Comments concerning positive or negative aspects of instruction, but which are superficial and/or vague. This includes value statements tagged onto a description	* Comments concerning positive or negative aspects of the teacher, but which are superficial and/or vague. This includes value statements tagged onto a description	* Comments concerning positive or negative aspects of student experience/behaviour are superficial and/or vague. This includes value statements tagged onto a description		* Comments concerning positive or negative aspects of the action are trivial and/or vague
2	* Descriptions of strategy or practice which includes an explanation, a reason or possible cause for the observation.	* Descriptions of teacher behaviour and/or characteristics which includes an explanation, a reason or possible cause for the observation.	* Descriptions of student experience/behaviour which include an explanation, a reason or possible cause for the observation.	* Comments on achievement, or lack thereof, are focused on non-trivial (bukan sepele) aspects of the goal. However, suggestions pertaining (berkaitan) to achieving the goal are absent or not specific.	* Comments (positive and negative) are focused on non-trivial aspects, but are not specific.
	* Comments (positive and negative) are focused on non-trivial aspects of instruction but are not specific.	* Comments (positive and negative) are focused on non-trivial aspects of teacher behaviour and/or characteristics but are not specific.	* Comments (positive and negative) are focused on non-trivial aspects of student experience/behaviour but are not specific.		

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	* Suggestions pertaining to improving teaching strategies or instruction are not specific or detailed. Also these suggestions are not backed up with a rationale or expected outcome.	* Suggestions pertaining to improving teacher behaviour and/or characteristics are not specific or detailed. Also these suggestions are not backed up with a rationale or expected outcome	* Suggestions pertaining to improving student experience/behaviour are not specific or detailed. Also these suggestions are not backed up with a rationale or expected outcome		* Suggestions are not specific and are not backed up with a rationale or expected outcome
3	* Comments (positive and negative) on instruction are insightful, including an indication of the significance of the comment.	* Comments (positive and negative) on the teacher's behaviour and/or characteristics are insightful, including an explanation and/or an indication of the significance of the comment.	* Comments (positive and negative) on student experience/behaviour are insightful, including an explanation and/or an indication of the significance of the comment.	* Comments on achievement, or lack thereof, are insightful. Suggestions are concrete and action oriented pertaining to achieving the goal.	* Comments (positive and negative) are insightful, including an explanation and/or an indication of the significance of the comment.
	* Suggestions are concrete and action oriented, pertaining to improving the quality and extent of learning/teaching strategies, use of materials, etc. They need to be backed with a rationale or expected outcome.	* Suggestions are concrete and action oriented pertaining to improving the quality of the teacher behaviour and/or characteristics. They need to be backed with a rationale or expected outcome.	* Suggestions are concrete and action oriented pertaining to improving the quality of the student experience/behaviour. They need to be backed with a rationale or expected outcome.		* Suggestions are concrete, action oriented. They need to be backed with a rationale or expected outcome.

4	* Comments and/or suggestions are linked to recognized good practices, overall curriculum goals, and/or theories. They are made in relation to a wider context	* Comments (positive and negative) and/or suggestions are linked to recognized good practices, overall curriculum goals, and/or theories. They are made in relation to a wider context.	* Comments and/or suggestions are linked to recognized good practices, overall curriculum goals, and/or theories. They are made in relation to a wider context.
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RESULT AND DISCUSSION

The analysis of post lesson discussion notes based on table 1 is as follows.

Table 2. Categories and Levels of Reflection at SD GagasCeria

Categories	Teaching and learning strategies	Teacher behaviour	Lesson as experienced by students	Achievement of lesson and curriculum objectives	Logistics; management; planning	
1	2019	20%	28%	48%	0%	4%
	2021	19%	0%	48%	0%	9%
2	2019	0%	0%	0%	0%	0%
	2021	0%	0%	19%	5%	0%
3	2019					
	2021					
4	2019					
	2021					

Based on the data in table 2, the observer gave the most responses to the student learning experience, which was 48%. Even in this category, the level of teacher reflection has increased by 19% for level 2 in 2021. The teacher has given reasons or backgrounds about the data/facts presented during the post lesson discussion.

An example of a teacher's reflection on student learning experiences at level 1 is the observer observing student A's dialogue with student B in grade 4. Student A said he had heard positive and negative words, but did not know the meaning but had seen them in batteries. Student A asks student B, what are the instructions given by the teacher. Student B explains again and makes sure student A understands the teacher's explanation by asking questions again. In addition to observing interactions in learning that occur, the teacher also observes the behavior of other

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students, for example, there are children who seem to move frequently, drawing pencils repeatedly. Based on these examples, the teacher reveals the facts seen during the lesson.

Meanwhile, in 2021, the observer explains the reasons or background for the data/facts found during the observation study. For example, the observer observes student dialogue that occurs during the breakout room, students are asked to discuss in groups about solutions related to the problems presented. One member of group 3, immediately wrote down the solution. The student asks his group to choose the solution he has written. However, one member of the group wants the answer chosen by confirming to ensure that his friend's solution is chosen. Collaboration to choose the best solution for the problem has not occurred in the group. Not all students in the group expressed their opinion. It is possible that students feel uncomfortable expressing different opinions. In fact, when discussing, students may express their disagreement. Being assertive in expressing opinions, including straightening out the understanding of their group mates, needs to be taught and trained so that students are more daring to express opinions that differ from their friends.

The table also shows that in 2021 there will be no reflection on teacher behavior. Previously, reflections on teacher behavior during learning were still being discussed. For example, teachers who directly provide problem-solving strategies to students, do not ask students what strategies they will do. Communication always starts from the teacher, students just follow what the teacher says. The nuances of teacher evaluation still occur. However, in 2021, by looking at the results of the previous post lesson discussion analysis and agreeing on the focus of the observations to be carried out, it will change the direction of the reflection discussions that occur.

In the post lesson discussion in 2021, there are reflections on learning objectives and curriculum. For example, the observer observes the learning objectives written in the lesson plans. The first goal is for students to identify problems regarding events on the highway. The observer stated that many problems on the road arise from the response of children both classically and in small groups. During the discussion, a vocabulary of symbols and signs emerges. This can be sharpened again by asking why students come to such conclusions? Which part of the picture is the student referring to? The second goal is to find a solution to the problem. The solutions presented by students are more focused on the driver. If you look at the group's answers, are the answers given by the students in line with the teacher's expectations? The solutions given tend to be preventive in nature by being careful, looking at the zebra cross, looking at the symbol. Is there any influence of understanding on the text so that the answer is almost the same? There is even a response that is preventive in nature, even though what is being discussed is something that has already happened. The solution to solve the problem at that time had not yet emerged from the students. For example, to calm your father's anger, ask your mother or an officer such as the police for help. Perhaps this influences students' ability to identify problems or data in the text. Is there any influence of understanding on the text so that the answer is almost the same? There is even a response that is preventive in nature, even though what is being discussed is something that has already happened. The solution to solve the problem at that time had not yet emerged from the students. For example, to calm your father's anger, ask your mother or an officer such as the police for help. Perhaps this influences students' ability to identify problems or data in the text.

Based on the post lesson discussion notes, there is a change in the level of teacher reflection this year. At the beginning of the lesson study, the results of previous reflections are displayed and it is hoped that this year there will be an increase in the quality of reflection that has an impact on learning. According to Sato (2012), reflection activities in lesson study become a medium of learning where everyone has the same focus to look back on the learning that has occurred, which parts are still having difficulties, which parts of learning may occur, what follow-up actions. Sometimes the reflection forums that occur are still filled with words with 'evaluation' nuances such as, "Where is the good thing?" or "Where's the bad thing?". However, as long as the assessment is good or not, the teacher is unlikely to experience growth. In fact, teachers who immediately evaluate when they see learning are teachers who are inexperienced and whose knowledge as a professional is still shallow. Teachers who already have a lot of experience will not give an 'evaluation' even though they have observed the lesson. Therefore, it is necessary to create a reflection forum where we learn from each other from the facts of learning in the classroom, rather than conducting 'evaluations' or giving 'suggestions'.

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Through the reflection instrument that has been developed by Ono, et al (2013) which is contained in table 1, schools have a rubric reference in improving the teacher's observation and reflection abilities. The instrument can show the most important observations from the observer based on 5 categories. The level of reflection quality expressed by the observer also shows the depth of observation in learning. The results of the analysis of the observers' reflection documents can be used as a moment of teacher learning development because there is a need in him to make this activity to deepen their own lessons, whether it be in the form of learning materials, skills that need to be developed in children, understanding related to the learning process, and teacher commitment in improving the quality of learning in the classroom.

CONCLUSION

Lesson study is one way to improve the process of learning activities, both for students and teachers. Through lesson study, teachers can improve their professional skills through reflection activities that occur during post lesson discussions. The category and level of reflection studied by Ono (2013) is one of the instruments that can be used to determine the quality and level of reflection in schools.

The category and level of reflection instruments designed to measure post lesson discussion /reflection presented by Ono (2013) is quite detailed. Referring to this instrument, it can be seen that the category of reflection becomes the focus for individual teachers, groups of teachers in schools as learning communities, and also schools as educational institutions. The priority of learning activities carried out by the teacher/observer can be seen from the comments or responses given. Does the teacher/observer only see the learning process that occurs in the classroom as a learning activity, does the observer observe the impact of learning on students but has not explained the reason for the behavior or action, does the observer see the background of the action or behavior that appears in the learning process, does the observer relate the process learning with learning objectives within the curriculum or in a broader context? This will affect the learning design that will be made by the teacher.

Reflection analysis conducted at the end of the lesson study activity is an important part of improving the quality of learning that occurs in the classroom. This can be used as a reference for improving the quality of further learning and developing teacher professionalism. The results of this analysis become sustainable data in improving the quality of education carried out in schools.

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