

Implementation of Lesson Study Based on PDCA Concept in Improving Professionalism Teacher

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Abstract—This study aims to (1) find out how the Lesson study process using the PDCA concept, then (2) want to know how to apply Lesson study by using the PDCA concept to increase teacher professionalism, and (3) want to know the effectiveness of using Lesson study using the PDCA concept towards increasing Teacher Professionalism. Data collection used is by using the method of literature review approach, and observation through observation activities in the field. The results of the study stated: (1) that the implementation of the lesson study at the school was conducted in four stages, namely Plan, Do, Check, Act. (2) the implementation of lesson study has an impact on teachers, students and schools. One of the benefits felt by teachers is that the existence of the lesson study will increase professionalism in teaching. The benefit for the school is lesson study that is carried out will help the school program in improving the quality of learning processes and outcomes. The benefits felt by students are that students are more enthusiastic when studying in the classroom. (3) Constraints faced are in terms of costs, culture, time and curriculum.

Keywords—*lesson study; PDCA; teacher professionalism*

I. INTRODUCTION

Education plays an important role that cannot be solved by someone in carrying out daily life. In order to improve the quality of education in the current era of industrial revolution which demands readiness in all matters and all fields, there are important aspects that need to be considered, one of which is school facilities and infrastructure at all levels of education, including at the level of vocational high school. Because, without the existence of facilities and infrastructure, the implementation of education will not run well [1]. In fact, management of facilities and infrastructure in Vocational Schools is not as easy as it is imagined. The proof is that there are still obstacles occur in the field, such as inaccuracies in the management of facilities and infrastructure due to the lack of knowledge related to how to manage good and correct educational facilities and infrastructure starting from planning, procurement, inventory, maintenance, and elimination.

To deal with these problems, it is necessary to do an effort to create a safe, comfortable and pleasant learning atmosphere, namely the management of educational facilities and infrastructure. The management of infrastructure deals with regulating and maintaining educational facilities and infrastructure in order to contribute optimally and meaningfully

to the course of the educational process. With the management of educational facilities and infrastructure, schools are expected to be able to manage educational equipment effectively and efficiently in order to create pleasant school conditions both for students, teachers, even staff in school [2].

In connection with the management of facilities and infrastructure, Nusantara Vocational School Balikpapan is one of the private educational institutions that has facilitated the students with adequate facilities and infrastructure. Considering the importance of educational facilities and infrastructure in schools, the infrastructure should be able to be managed properly based on the applicable procedures and the mechanism for managing school infrastructure. It will facilitate the achievement of effective and efficient learning objectives. Therefore, this study tried to examine more deeply the management of educational facilities and infrastructure in improving the quality of education at Nusantara Vocational School in Balikpapan so that it could be a reference for other private schools both in Balikpapan City and outside Balikpapan in improving the quality of facilities and education infrastructure.

II. METHOD

This research is a descriptive study with a qualitative approach. Define qualitative research as a research procedure that produces descriptive words from people and observed behavior from the phenomenon that occurs" [3]. Sugiyono said "The main purpose of descriptive research is systematically, the facts and characteristics of objects and subjects that are precisely examined" [4]. In the qualitative research, Lincoln and Guba it said that "The instrument of choice in naturalistic inquiry is the human. We shall see that other forms of instrumentation may be used in later phases of the inquiry, but the human is the initial and continuing mainstay. But if the human instrument has been used excessively in earlier stages of inquiry, so that an instrument can be constructed that is grounded in the data that the human instrument has product" [5].

The focus of research requires researchers to communicate intensively with data sources in order to explore the application of lesson studies based on the PDCA concept, the Lessons Study process, and the effectiveness of lessons. Study in improving teacher professionalism. The location of this place

in the city of Bandung. Research on the implementation of Lessons Study based on the PDCA concept in increasing teacher professionalism was carried out in a private school in the city of Bandung. The city has a good quality education program, has a superior program of clean and leading schools, and special talents, management of educators and students who are reliable and professional, principals who already have qualified and experienced, good school management ranging from planning, implementation to supervision. This can be a reference and is challenging to study so that it can be used as an application for Lessons Study.

Determination of research subjects or study was conducted by purposive sampling. purposive sampling is a sampling technique that is determined by the objectives of study or certain considerations [6]. So, the subject of research is the stake holders at the BPI 2 Bandung High School who will be researched to compile and carry out the lessons study. So, the researchers determined the subjects in this study were 6 people. The subjects studied were people who played an important role in lesson study at SHS BPI 2 Bandung City.

III. RESULTS AND DISCUSSION

A. Planning Phase (Plan)

In the planning stage, the Bandung BPI 2 SHS teachers who carry out lesson study activities have been able to prepare lesson plans for class X and XI quite well. The lesson plan prepared reflects student-centered learning, and anticipation / preparation for all possibilities that will occur during the implementation of learning both at the initial stage, the core, until the end of learning. Each learning material has its own characteristics. SBK material will be explained by Mathematics material. SBK with the nature of the material which generally involves emotions and soul. Mathematics with abstract material properties requires learning devices that are able to make more concrete. Mathematical material that is generally symptomatic can be sensed, requiring learning tools that make children able to uncover existing symptoms and analyze them into a whole understanding or concept. Learning tools in the context of concretizing problems and in the framework of conceptualizing facts need to be prepared by considering each scientific principle so that the understanding obtained by students does not deviate from the prevailing scientific rules. In the framework of lesson study, the teacher should be able to choose and organize subject matter and package it as teaching material as a learning tool. In this case the teacher should know the essential concepts of the material so that they do not experience difficulties in compiling learning devices.

B. Implementation Stage (Do)

In the second stage, learning activities are carried out by an agreed teacher or at his own request to practice the Mathematics RPP which has been prepared together. The teacher looks enthusiastic in carrying out learning both in class X and in class XI. The class X material discussed by the teacher is a linear equation of three variables and class XI material is about polynomials (many terms). In class X, students were quite excited when asked by the teacher to form a group consisting of 4 people based on the seating, deftly

students immediately turned tables and benches so that group members could sit facing each other. All groups are ready to wait for the next instruction or direction of the teacher. When the teacher asks each group to determine the group leader then by agreement the answer all questions and do the tasks as stated on the sheet the student's work. After completing the assignment and answering questions on the student worksheet, the teacher asks a student to explain or read the results of the work of each group. In general, the student answers are the same and after that the teacher gives reinforcement to all students about the answers read by students, then the teacher concludes the discussion about the system of three-variable linear equations. Before closing the lesson, the teacher gives assignments or homework about the system of linear squared inequality.

During the learning process calmly, the observer does his duty to observe all the learning processes carefully and record them in detail. The results of the writing and notes will be used as evidence or supporting observations during discussions with lesson study participant teachers

C. Reflection Stages (check)

The third stage is a very important stage, namely reflection activities carried out in the form of discussions followed by all lesson study participants. The discussion begins with the delivery of impressions of the teacher who has practiced learning, by submitting comments or general impressions and special impressions of the learning process that is done and the difficulties and problems that are felt in carrying out the RPP for mathematical material that has been compiled. Furthermore, colleagues who act as observers submit comments or wise advice on the learning process that has been carried out by the teacher supported by evidence obtained from observations. Various opinions can develop in the discussion, recorded by all teachers and used as feedback for all teachers for the sake of improvement or improvement of the next learning process.

D. Stages of Act

From the results of reflection, the teachers obtain new knowledge or important decisions in order to improve and enhance the subsequent learning process, both for individuals, and for managerial. For individuals, various valuable findings and inputs that were conveyed during the discussion at the stage of reflection (check) would certainly be a provision for teachers, both those who act as instructors and observers to develop a learning process for the better.

For managerial, involving the headmaster as a participant in the school Lesson Study will get a number of valuable inputs for the benefit of developing education management in the school as a whole. With the involvement of the principal directly in lesson study, they will understand what the teacher and students are experiencing in the learning process. As a result, principals became more focused on realizing themselves as educational leaders in schools.

The results of the mathematics teacher's teaching ability using Lesson Study achieved initial scores with an average of 51.78, which increased to 73.86 from the aspects of opening,

explaining, asking questions, giving reinforcement, variation, guiding discussion, managing classes, and closing skills. At the first meeting the teacher seemed still awkward and hesitant so that students had difficulty in understanding the material, but at the meeting the two teachers were used to it and were not awkward anymore so that they were more stable in providing math material. Mathematical learning carried out by teachers in Lesson Study can make students happy to follow it, because the experiences experienced by students everyday are highly valued by friends and teachers. The experience experienced by students becomes the initial idea or knowledge of the concepts that will be discussed by the teacher.

Teacher's learning successfully motivates students to be more active and creative, both in group discussions and in filling out questions. The teacher has succeeded in creating learning to be meaningful and enjoyable. The teacher has succeeded in increasing the involvement of students in learning which ultimately increases student learning achievement on mathematics subjects. Meaningful learning developed by the teacher can help students build the relationship between the information provided by the teacher in the form of new knowledge with experience (other knowledge) that has been owned and mastered by students.

IV. CONCLUSION

Based on the data obtained, it can be concluded that the application of the lesson study learning model can improve teacher professionalism. To improve basic teaching skills both teachers and lecturers can apply lesson study learning models to students. The point:

- Lesson Study is a coaching effort to improve the quality of learning conducted by a group of teachers collaboratively and sustainably, based on the principles of collegiality and mutual learning to build a learning community. Lesson Study is an activity with characteristics: (a) long-term shared goals; (b) emphasizing important subject matter; (c) emphasize the study of students carefully; and (d) prioritize direct learning observation.
- Lesson Study appears as an alternative to overcome problems related to learning practices which have been considered to be less effective. Lesson Study is conducted with the aim of: (a) providing a better

understanding of how students learn and teachers teach; (b) provide certain results that are useful for other teachers in carrying out learning; (c) improve learning systematically through collaborative inquiry. (d) build a pedagogical knowledge, where a teacher can draw knowledge from other teachers. In addition, Lesson study provides many benefits for teachers, including: (a) the teacher can document the progress of his work, (b) the teacher can get feedback from other members / communities, and (c) the teacher can publish and disseminate the final results of Lesson Study in the form of scientific papers.

- Lesson Study is carried out based on cyclic stages, including: (a) planning stage; (b) implementation (do); (c) reflection (check); and (d) act. 4) Development of Lesson Study can be done by applying: (a) School-based Lesson Study; and (b) MGMP-based Lesson Study. In addition, another form of development for the implementation of Lesson study activities is on microteaching activities as part of learning activities at SMA BPI 2, Bandung City. Other forms of development can be done on peer teaching activities as part of teacher certification activities, especially for teacher certification participants through the PLPG pathway. This Lesson Study activity can also be followed up with research activities in order to improve the quality of learning, namely by conducting Class Action Research (CAR).

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