

Improving Teacher Skills in Using Interactive Multimedia Learning Media through Supervision with Lesson Study Approach at State Vocational High School 1 Nagan Raya

Agus Suryansyah¹, Biner Ambarita², Saut Purba³

¹(Teacher at State Vocational High School 1 Nagan Raya/ State University of Medan)

^{2,3}(Lectures at State University of Medan, Indonesia)

Corresponding Author: Agus Suryansyah

Abstract: *This study aims to improve the ability of productive teachers in using interactive multimedia learning media through supervision with a lesson study approach in State Vocational High School 1 Nagan Raya. This research was conducted for 2 months from May to July 2017. The subjects in this study were 6 teachers of SMK productive and one school supervisor. The design of this research is School Action Research (ACT). The researchers used the Kemmis & Mc research model. Taggart designed with cycle process. The results that can be taken is based on the results of the cycle I obtained 4 teachers (65%) who use interactive multimedia learning media categorized quite skilled, 2 teachers (35%) using interactive multimedia learning media has reached the category good or skilled. The average value of teachers' ability in using interactive multimedia learning media is 77.34% (enough). While the results in cycle II, obtained by six teachers (100%) who use interactive multimedia learning media with good category (skilled). The average value of teachers' ability in using interactive multimedia learning media is 84.11% (good). Thus the application of supervision with lesson study approach can improve the ability of productive teachers in using interactive multimedia learning media in State Vocational High School 1 Nagan Raya as evidenced by the increase from cycle I to cycle II*

Keywords : *Teacher Skills, Interactive Multimedia, Lesson Study*

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I. Introduction

Teacher competence includes pedagogic, personality, social and professional competence. Based on National Education Regulation Number 16 of 2007 Indicators of pedagogical competence for subject teachers include: (a) mastering the characteristics of learners from the physical, moral, spiritual, social, cultural, emotional, and intellectual aspects; (b) mastering learning theories and learning principles that educate; (c) developing curriculum; (d) organize educational learning; (e) utilizing ICT for learning purposes; (f) facilitate the development of potential learners to actualize their potential; (g) communicate effectively, empathetically, and courteously with students; (h) conduct assessment and evaluation of learning processes and outcomes; (i) utilize assessment and evaluation results for learning; (j) take reflective action to improve the quality of learning [1].

From teacher's pedagogic competency indicator that related to utilizing ICT (Information and Communication Technology) for the importance of learning is an important thing for teacher itself, especially in globalization era and technology today. Teachers must always be able to absorb and always renew themselves to be able to create interactive, interesting, effective, and efficient learning scenarios for learners to realize quality learning process. Learning media is one of the important and integral components of the whole learning process in all programs and levels, so the skills to develop and utilize instructional media are needed by a professional teacher. According to the psychologist, said that the material in the memories of students who stimulated media appropriate to survive long because the nature of the media has a strong stimulus power [2].

Referring to the above opinion it is clear how important the use of media in learning, especially engineering. One media that can be used is visual motion media. The benefits of these media in the learning process of learners, among others, make the learning process to be better, teaching materials will be clearer, learning methods are more varied and learners do a lot of learning activities. Thus the process of delivering material from teachers to learners will be better. One type of media that can be used by teachers in learning is interactive multimedia, which is a type of multimedia that is generating positive interaction of students on learning materials. Interactive multimedia is basically the same as a guidance program where students are given assistance in order to achieve optimal learning outcomes. Interactive multimedia can also help teachers to present the material effectively, efficiently, and more attractively, easily understood and clear; Able to help

teachers to provide students with practice questions of interest, and help students to better understanding the learning materials.

The opinions of some experts say there are various models of training and guidance to improve the competence or ability of teachers, including; Sahertian states that supervision can improve teacher skills in which one of the functions of supervision is to provide knowledge and skills to any staff member, in this case the intended member is including the teacher [3]. Ibrohim states that lesson study can improve teacher competence through collaborative and sustainable learning [4]. While Suhartini, suggests several factors that may affect teacher competence [5] based on the opinions of some experts, namely: Spencer, who express internal motivation, character and self-concept affect teacher competence, and Munandar, who stated that talent and training influenced teacher competence [6] and Uno, stating that teacher competence is influenced by educational background, teaching experience, duration of teaching, and environment [7]. Furthermore the author in [3] stated that supervision can improve the skills of teachers where one of the functions of supervision is to provide knowledge and skills to each staff member in this case the staff members in question are including teachers.

Many factors exist, so in this study selected lesson study as an effort to improve the skills of teachers using interactive multimedia tutorial. Lesson study is a teacher-building model that aims to improve teacher's weakness in teaching. In lesson study activities, a number of teachers will jointly improve their competence by learning from, about, and for better learning. Some of the reasons for choosing lesson study as an appropriate guidance model for teachers include:

- a. lesson study is an effective way to improve the quality of learning by teachers and student activities in which:
 - 1) the development of lesson study is conducted and based on knowledge sharing Professionals based on the practice and teaching outcomes of teachers;
 - 2) an emphasis on the quality of students' learning;
 - 3) the competencies students expect are the main focus and point of interest in classroom learning;
 - 4) based on real experience in the classroom, lesson study can be the basis for the development of learning;
 - 5) lesson study will place the role of teachers as learning researchers; And
- b. well-designed lesson study will make a professional and innovative teacher, where by implementing a lesson study the teachers can:
 - 1) determine the competencies students need to have, plan and implement effective learning;
 - 2) review and enhance learning that is of benefit to students;
 - 3) deepening knowledge of the subjects presented by teachers;
 - 4) determine the competency standards to be achieved by the students;
 - 5) planning collaborative learning;
 - 6) thoroughly review student learning and behavior;
 - 7) developing reliable learning knowledge;
 - 8) Reflection on the teaching he or she exercises based on the views of the students and colleagues.

From the opinions above supervision with lesson study approach is predicted to improve the skills of teachers in using interactive multimedia learning media. To prove this prediction, it is necessary to conduct school action research on Teacher Skills Improvement in Using Interactive Multimedia Learning Media through Supervision with Lesson Study Approach at State Vocational High School 1 Nagan Raya.

II. Method

The subject of this research were 6 (six) productive teachers with ability in using interactive multimedia learning media at State Vocational High School 1 Nagan Raya. This action research was conducted for two (2) months starting from the end of May until the end of July 2017. The design used in this research is Action Research School (ARS) [8], a study is a collaboration between researchers (facilitator), Principals and school supervisors as well as teachers in improving their ability to use interactive multimedia learning media. This research uses research model according Kemmis & Mc. Taggart designed with a minimal cycle process consisting of two cycles. Each cycle consists of four stages, namely planning (plan), implementation (act), observations (observe), and reflection to obtain accurate data from teachers, Data collection techniques in this study are as follows:

- a. Provision of instruments Observation of media application analysis.
- b. The Observation. Observation is a data collection technique conducted by observing and systematically recording the symptoms investigated.

Instrument of data collection in this research as follows: (1) Initial questionnaire aims to diagnose the level of ability of teachers in using learning media, especially multimedia interactive learning media. (2) Observation sheets are used to observe: (a) the ability of teachers to use interactive multimedia learning media;

(b) observe the results of interactive multimedia instructional media products made by teachers; (c) observe the actions of supervisors (supervisors) to conduct supervision actions with lesson study approach. Criteria are used as measures of success against actions taken in each research cycle. This action research is said to succeed if the average value of the ability of teachers in using interactive multimedia learning media reaches 80. The success of the participants' achievement in this research is 80% of subjects can use interactive multimedia learning media. Data analysis using percentage technique. To see the percentage of improvement is compared before and after supervision with lesson study approach. The data analysis will include three (3) phases in the opinion of the author in [9] is a data reduction (reduction of data), the data display (presentation of data), conclusion drawing / verification (conclusion and verification).

III. Result And Discussion

The results of the assessment of the implementation of supervision activities with a lesson study approach to improve the skills of productive teachers in using interactive multimedia learning media from the implementation of cycle I to cycle II has increased value. It is seen that in cycle I the average value of the implementation of supervision with the lesson study approach is 69.37% and increased in the second cycle is 88.70%. Likewise with the school supervisory measures that supervise with lesson study approach in the first cycle is 71.53% and increased in the second cycle is 87.50%. While the average value of teachers' skills in using interactive multimedia learning media in the first cycle is 77.35% and increased in cycle II to 84.11%. Likewise with the value of media owned by each teacher in the cycle I average value is 69.67% and increased in cycle II to 84.90%. Thus it can be concluded that there is an increase in productive teacher skills in using interactive multimedia learning media. Further improvements in the average scores for all assessments can be drawn on the Fig 1. And from the findings of the research in cycle I and cycle II, there is an increase in the ability of teachers in using interactive multimedia learning media through supervision with a lesson study approach in State Vocational High School 1 Nagan Raya. Results of improving the ability of productive teachers in using interactive multimedia learning media from cycle I and cycle II can be seen in the Fig 2. Based on Fig 2 showed that improving the ability of teachers in using interactive multimedia learning media there is an increase between the initial observation, cycle 1 and cycle 2 with an average value of 39.29%, 77.35% and 84.11%. The increase that occurred in cycle I and in cycle II is caused by the implementation of supervision with the lesson study approach to productive teachers, where in the supervision activities with the lesson study approach the teachers have the opportunity to discuss each other RPP, and also the media used constraints Encountered in learning. This is in line with the statement of Hart et al (2011: 16) that through repeated processes, teachers have many opportunities to discuss learning and know the impact of learning on learners. In addition, supervision with the lesson study approach helps teachers to be motivated to improve their teaching practices to be better because of the involvement of other teachers and school supervisors in open class activities where teachers open themselves to be seen while doing the learning so that the desire to be better arises because of the involvement of others in Supervision with lesson study approach.

Supervision with a lesson study approach is also able to help teachers to see their own teaching when exercising reflection on their advantages and disadvantages in using interactive multimedia learning media and getting information from other teachers how to teach them from the views of others, so that things of concern to teachers can be seen And delivered by other teachers. Implementation of supervision with lesson study approach, especially in improving the ability of teachers in using interactive multimedia learning media to productive teachers provide a new paradigm in learning. The use of interactive multimedia learning media is rare or never used by productive teachers. Some teachers have used the power point media, and students have not been involved or interacted with previous learning media. With the implementation of supervision with lesson study approach, productive teachers become more accustomed to using learning media, especially interactive multimedia learning media.

IV. Figures And Tables

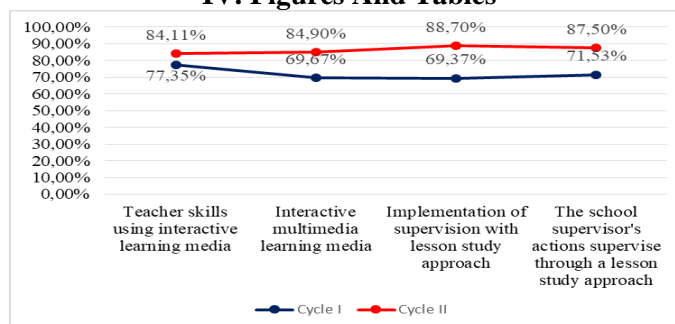


Figure 1: productive teacher skills in using interactive multimedia learning media on Cycle I and Cycle II.

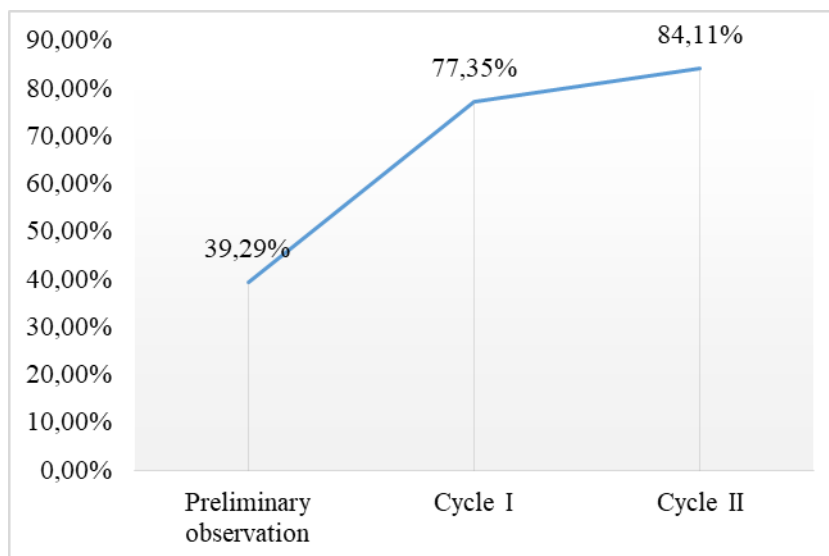


Figure 2: Result of Improving teachers' ability on Preliminary observation, Cycle I and Cycle II.

V. Conclusion

From the results of research and discussion of research data, it can be concluded that the application of supervision with lesson study approach can improve the ability of productive teachers in using interactive multimedia learning media in State Vocational High School 1 Nagan Raya as evidenced by the increase from cycle I to cycle II.

Based on the results of research conducted, the researchers suggested:

- Teachers are advised to use interactive multimedia learning media in learning in the classroom.
- The principal is suggested to facilitate instructional media, especially interactive multimedia learning media needed by teachers in schools to support teachers' success in implementing the learning process in the classroom more optimally.
- School supervisors should be able to continue to develop supervision with lesson study approach in schools and supervise with the lesson study approach routinely in developing teachers especially in using interactive multimedia learning media.
- To other researchers for the results of research on supervision with this lesson study approach can be used as study material and reference for further research.

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