



Strengthening teacher pedagogical literacy after the Covid-19 pandemic in vocational secondary education in Banten Province

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ABSTRACT

The purpose of this study is to improve the pedagogic competence of teachers in implementing literacy in learning through lesson study, namely: socialization, training, self-evaluation, reflective pedagogical paradigm, exploration, simulation, documentation, group discussion, mapping, and practice at SMK Negeri 3 Tangerang Selatan, Banten Province, Indonesia. This type of action research consists of two cycles, each carried out in four meetings. The research procedure includes (1) planning, (2) implementing actions, (3) observing, and (4) reflection. The subjects in the study were productive teachers and normative teachers at SMK Negeri 3 Tangerang Selatan, opening 15 people. The results showed that the teacher's pedagogic competence in implementing literacy in pre-action learning was 37%, the first cycle increased by 83%, and the second increased significantly by 100%. Classically the percentage has increased by 63%. Based on these results, lesson study can improve the pedagogic competence of teachers in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province, Indonesia.



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INTRODUCTION

Vocational Secondary Education (SMK) is an important part of the national education system, which has a strategic position to realize quality students with active involvement from the industrial world and the world of work (IDUKA). Since the beginning of 2020, Vocational Secondary Education (SMK) has entered a new situation due to the impact of the Covid-19 pandemic that has disrupted learning and learning activities (Futra et al., 2021). The situation invites various policies to deal with the impact of the increasingly severe Covid-19 pandemic. The debriefing can be poured into the learning plan. Teachers as educators have a crucial role in determining learners' success so that it becomes a determinant of improving the quality of education in schools (Syauqi et al., 2020).

President of the Republic of Indonesia, Joko Widodo's directive on "Acceleration of Superior Human Resource Development 2020-2024" is "Improving the qualification pyramid of labor to become a trained, skilled workforce to absorb everything into industries" for Vocational Secondary Education (SMK) in areas connected with Industries and the World of Work (IDUKA) so

that graduates are following needs, and ready for new things. The Ministry of Education and Culture of the Republic of Indonesia published a guide to the National Literacy Movement, saying that the government promotes six national lethargy cultures: literacy, numeracy literacy, science literacy, digital literacy, financial literacy, and citizenship literacy (Atmazaki et al., 2017).

Therefore, the role of teachers in Education is realized in the Law of the Republic of Indonesia Number 14 of 2005 concerning teachers and lecturers who mandate the development and development of the teaching profession as the actualization of the educator profession. According to Law No.20/2003 on Sistem Pendidikan Nasional, teachers must have competence, one of which is pedagogical competence. Pedagogical competence is the best way to support the students learning and the best way to support learners' learning by ensuring the quality of teachers in the field of disciplines and learners taught by teachers professionally (Maclellan, 2008). Ryegård et al. (2010) explained that pedagogical competence is teachers' ability to learn and transform knowledge, attitude, and skills (skills) in the teaching and learning process for learners.

Pedagogical competence focuses on five sub-competitive teacher pedagogical competencies that are commonly implemented to improve learners' learning outcomes, namely: (1) The ability to understand learners; (2) The ability to create POAC is planning (planning), arrangement (organizing), implementation (actuating), and control (controlling); (3) The ability to carry out learning; (4) The ability to evaluate learning outcomes; (5) The ability to develop learners to actualize various potentials (Budiyono & Santosa, 2018; Johnson & Johnson, 2009; Uerz et al., 2018). According to Barley and Diamon (2010), pedagogical competence is the practice of a teaching framework and is delivered through structured knowledge. This knowledge includes experience, evidence, understanding moral goals, and spreading transparent values (Susanto et al., 2019).

Susanto et al. (2019) explained that pedagogical competence is the ability of teachers to create an atmosphere and learning experiences that vary in the management of learners according to the curriculum. Aimah et al. (2018) explained that as a standard to measure the professionalism of teachers in fulfilling their role in the teaching profession. The teacher is one of the components of Education that has an important role in achieving the success of the literacy program (Marti et al., 2018). This is because the teacher is a person who interacts directly with students in carrying out literacy in learning. Without a teacher, students cannot receive knowledge properly (Papert, 2005).

SMK Negeri 3 Tangerang Selatan is a reference in the Community Activity Program (PKM) because the school is an outstanding school with a center of excellence in animation. Location of SMK Negeri 3 Tangerang Selatan on Jl. Raya Puspipetek, Puri Serpong 1 Housing, Setu District, South Tangerang City, Banten Province, Indonesia. The vision of SMK Negeri 3 Tangerang Selatan is that educating competent students requires creative teachers and pedagogical literacy. One of the answers is to develop teachers' competence as educators through training and mentoring of school literacy movements, especially pin pedagogical literacy fields (Susanto et al., 2019). School literacy movement with a focus on pedagogical literacy is the foundation of the way of thinking and rationalizing the need for literacy movements to be implemented by all school residents consistently, continuously, and measurable (Piirto, 2011).

Therefore the pedagogical literacy movement needs to be understood and carried out with expository learning methods, including socialization, planning, implementation, and continuous evaluation (Susanto et al., 2019). Responsibility for the school literacy movement becomes a shared responsibility between the government, schools (management and educators), learners, parents of learners, and the community. The pedagogical literacy movement became a fundamental part when understood and implemented modernly, covering all dimensions and aspects related to school as a system (Gustine, 2018). Pedagogical literacy movement conducted in a planned and consistent manner in the implementation and evaluation, and follow-up of programs by all teachers who are focused on students and parental assistance facilitates human pillars that grow and develop as lifelong learners, with the principles of learning to know, learn to do, remember to be, learn to live together and learn to see (Wahjusaputri, 2015).

Improving the pedagogical literacy of teachers at SMK Negeri 3 Tangerang Selatan, Banten Province, according to Rivai and Sudjana (2011) by (1) Mapping pedagogic literacy, where teachers must have mastery of lessons to improve the quality of learning; (2) Mapping of teacher characteristics, where teachers must have teaching skills, teacher attitudes, teaching experience,

teaching methods, assessment methods, willingness, and develop their profession; (3) Development of pedagogic literacy, where a teacher has communication skills, personality, willingness and ability to provide assistance and guidance to students; and (4) Measurement and evaluation of pedagogic literacy programs, where a teacher has relationships with students and colleagues, self-appearance as well as other required skills. This research was conducted on 15 teachers, both productive teachers and normative teachers.

Based on the pre-test analysis of the teacher's pedagogic competence in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province, it has yet to achieve the desired criteria. The results of teacher pedagogic competence based on interviews, observations, and questionnaires show that the average score classically is 63, with a percentage reaching 37%, or seven teachers are already competent. In comparison, those who are not qualified reach 63%, or there are eight teachers. This shows that there are several obstacles faced by teachers in implementing literacy in learning, including teachers do not understand the concepts, objectives, principles, and stages of implementing literacy in schools, teachers do not understand the indicators or focus of activities that develop literacy in learning for students, and teachers have not made maximum use of the literacy support infrastructure in the classroom.

The interviews showed that most teachers had yet to receive material related to literacy, either from training or the like. The learning so far only prioritizes knowledge, attitudes, and skills related to the subjects being taught. Some teachers have received literacy material but have yet to apply it thoughtfully. This is due to the absence of continuous teacher competency development through supervision, lesson study, and sharing of experiences between teachers.

Based on the problems described above, the author and his collaborator partners, namely teachers at SMK Negeri 3 Tangerang Selatan, Banten Province, took the initiative to determine alternative actions to improve the pedagogic competence of teachers in implementing literacy in learning. Alternative problem-solving is selected through the Lesson Study method. In order to create a learning community field, lesson study is a methodology for promoting the teaching profession through cooperative and long-lasting learning assessments (Cajkler & Wood, 2016). Through a series of lesson study activities, there will be a learning process between fellow lesson study members so that directly or indirectly, it will be able to improve the quality of the learning process and, at the same time, increase the teacher's pedagogic competence (Cajkler & Wood, 2016).

The advantages obtained from the implementation of lesson study, according to Gunn and King (2015), include: (1) Teachers are more careful about the objectives of certain materials that will be taught to students; (2) Teachers have in-depth thoughts about learning objectives for the future interests of students; (3) Teachers can examine the best things that can be used in learning through learning from other teachers (participants or participants of lesson study); (4) Teachers learn about the content or subject matter from other teachers so that they can increase knowledge about what should be given to students; (5) Teachers can develop skills in teaching, when planning lessons and during learning activities; (6) Teachers can build abilities through collegial learning, in the sense that teachers can learn from each other about what they feel is still lacking, both about knowledge and skills in teaching students; (7) Teachers can develop the eyes to see students, in the sense of presenting.

In lesson study activities, teachers can solve problems faced in class, especially regarding implementing literacy in learning. This research aims to mobilize a group of teachers collaboratively through lesson study activities in planning, implementing, and reflecting on literacy activities in classroom learning. By conducting lesson study, it is hoped that the pedagogic competence of teachers in implementing literacy in learning can increase. This study aims to improve teachers' pedagogic competence in implementing literacy in each lesson through Lesson Study at SMK Negeri 3 Tangerang Selatan, Banten Province, Indonesia.

RESEARCH METHOD

This study used the School Action Research (PTS) design. According to Creswell and Creswell (2017), school action research is research conducted by school management as an educational organization to improve institutional performance, processes, and productivity. The author chose the school action research design model due to the problem of teacher pedagogic competence in carrying out literacy in every lesson at SMK Negeri 3 Tangerang Selatan, Banten Province, which still needs to reach the desired criteria.

Therefore, alternative actions were chosen to solve the problem through lesson study. This research action was carried out in two cycles. The classroom action research model describes the four steps and their repeaters: planning, implementing, observing, and reflecting (Sugiyono, 2006). The research subjects used in this study are productive and normative teachers, totaling 15 teachers consisting of 4 male teachers and 11 female teachers in the 2020-2021 academic year. The research location is at SMK Negeri 3 Tangerang Selatan on Jl. Raya Puspipitek, Puri Serpong 1 Housing, Setu District, South Tangerang City, Banten Province, Indonesia. This research was conducted from September to December 2021.

The data collection techniques in this study used the techniques of tests, observation, interviews, documentation, and field notes to determine the pedagogic competence of teachers in implementing literacy in learning through lesson study in each cycle. Techniques for data analysis were used on both a quantitative and qualitative level. Quantitative techniques are carried out to analyze the pedagogic competence of teachers in implementing literacy in learning through lesson study in each cycle.

Data analysis was carried out in four steps (McNally, 2007): (1) Review and calculate the score of the results of filling in the observation instrument based on the guidelines for the instrument filled in with Formula 1; (2) Recapitulate the scores of the results of filling in the observation instruments that have been calculated in the table provided; (3) Categorize the scores of the results of filling in the observation instruments with predetermined criteria; and (4) Calculate the percentage of the results of filling in the observation instrument with the Formula 2.

$$NA = \frac{\sum X}{M} \quad (1)$$

Information:

NA = Final Score

$\sum X$ = Total Score

M = Total maximum score

$$SP = \frac{SK}{R} \times 100\% \quad (2)$$

Information:

SP = Percentage score

SK = Cumulative Score

R = Total Respondents

After analyzing the observations of the teacher's pedagogic competence in implementing literacy in learning, the percentage results are categorized according to the guidelines as in Table 1.

Table 1. Category Percentage of Observation Results

Criteria	Score Range
A = Very Good	86% - 100%
B = Good	70% - 85%
C = Fair	55% - 69%
D = Kurang	Under 55%

Quantitative data was obtained from observations, interviews, field notes, and documentation analysis. Qualitative data analysis in this study was carried out through three main activities, namely data reduction, data display, and conclusion drawing/verification (Sugiyono, 2006). Collecting qualitative data is likely easier to describe the increase in teacher pedagogic competence in implementing literacy in learning through lesson study.

RESULT AND DISCUSSION

Before the lesson study was applied, it showed that the pedagogic competence of teachers in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province obtained an average score of 63, which was included in enough category, which was in the score range of 55-70, with a percentage reaching 37% or there were eight there are already competent teachers, while those who are not competent reach 63% or there are seven teachers. The teacher's pedagogic competence has yet to be achieved in implementing literacy in learning because teachers need to understand the concepts, objectives, principles, and stages of implementing literacy in schools.

Teachers also need to understand the indicators or focus of activities that develop literacy in learning for students. Teachers have yet to make maximum use of literacy support facilities in the classroom. The interviews showed that most teachers had yet to receive material related to literacy, either from training or the like. The learning teachers have carried out at SMK Negeri 3 Tangerang Selatan, Banten Province, only prioritizes knowledge, attitudes, and skills related to the subjects they teach. Several productive and normative teachers have received literacy materials but have yet to apply them thoughtfully. This is due to the absence of continuous teacher competency development through supervision, lesson study, and various experiences between teachers.

After the Lesson Study was applied in the first cycle, it showed that the teacher's pedagogic competence in implementing literacy in learning at SMK Negeri 3 Tangel Banten Province had increased with an average score of 82 good compared to pre-action only 63 or enough category. Classically, the percentage of teacher pedagogic competence in pre-action was 37% and increased in the first cycle by 83%. It is proven that there is an increase in the percentage of teachers' pedagogic competence by 17%. Improving the results of teacher pedagogic competence between pre-action and cycle I can be seen in Table 2.

Table 2. Improving Teacher Pedagogic Competence in Pre-action and Cycle I

Observed aspects	Pre Action	Cycle I
Average Teacher Pedagogic Competence	63	82
Percentage of Teacher Pedagogic Competence	37%	83%

The research results in the first cycle are good but have not reached the percentage of classical teacher pedagogic competence of 85%. This is because there are still four teachers with pedagogical competence in implementing literacy in learning with enough category, even though the desired competence individually is at least good. Weaknesses that arise include there are still teachers who have not responded to enrichment books during literacy lesson hours, teachers have not responded to reading through varied reading strategies, teachers have not responded to reading in the form of oral, written, artistic, craft activities according to students' literacy skills, and there are still teachers who have not prepared a class reading corner.

The principal has not been maximal in carrying out lesson study activities because the principal has not been optimal in guiding teachers, there is no collaboration between high-competency teachers and low-competence teachers, and there is no response, providing comments and feedback on problems that arise in the implementation of teaching literacy. After being re-applied lesson study in cycle II showed that the pedagogic competence of teachers in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province experienced a significant increase with an average score of 92 or the very good category compared to the first cycle of only 80 or the good category, and pre-action of 63 or category enough.

Classically, the percentage of teacher pedagogic competence in pre-action was 37%, increased in the first cycle by 83%, and increased significantly in the second cycle by 100%. It is proven that there is an increase in the percentage of teacher competence by 63%. The increase in the results of teacher pedagogic competence between pre-action to cycle II can be seen in Table 3.

Table 3. Improving Teacher Pedagogic Competence through Lesson Study in Cycle I and Cycle II

Observed Aspects	Cycle I	Cycle II
Average Teacher Pedagogic Competence	80	92
Percentage of Teacher Pedagogic Competence	83%	100%

The research results in cycle II are very good, exceeding the desired individual competence by at least Good and already exceeding the percentage of classical teacher competence by 85%. An increase in teacher pedagogic competence in carrying out literacy in classical learning is caused by teachers having implemented literacy in classroom learning very well, including teachers who have responded to enrichment books during literacy lesson hours, teachers who have responded to reading through varied reading strategies, teachers have responded to readings in the form of oral, written, artistic and craft activities following the literacy skills of students, and the teacher has prepared reading corners and reading materials in each class.

The principal has been maximal in carrying out lesson study activities. It is proven that the principal has been optimal in guiding teachers, the collaboration between high-competence teachers and low-competence teachers is very good, and there are responses, comments, and feedback on problems that arise in the implementation of literacy. Thus the implementation of lesson study has an impact on increasing the pedagogic competence of teachers in implementing literacy in learning at SMK Negeri 3 Tangsel, Banten Province. This follows the opinion of Nash et al. (2021), which states that through a series of lesson study activities, there will be a learning process between fellow teacher members of the lesson study so that directly or indirectly, it will be able to improve the quality of the learning process and at the same time can improve the teacher's pedagogic competence.

Furthermore, Regulation of the Ministry of National Education of the Republic of Indonesia Number 13 of 2007 concerning School Principal Standards explains that when it comes to effectively using school resources, the principal can manage schools, manage change and develop schools towards effective learning organizations, managing teachers and staff in the context of resource utilization. The explanation above shows that applying lesson study improves teachers' pedagogic competence in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province. This activity is likely to be successful. This is based on data collection and analysis results showing a significant increase and exceeding the desired criteria.

Factors supporting the literacy of teacher-literate competence include: (1) Mastering the characteristics of students from physical, moral, spiritual, social, cultural, emotional, and intellectual aspects; (2) Mastering learning theory and educational learning principles; (3) Developing a curriculum that is in a way with the subjects that are mastered; (4) Organize educational learning; (5) Utilizing information and communication technology for learning purposes; (6) Conduct assessment and evaluation of learning processes and outcomes; (7) communicate effectively, empathically and politely with students; (8) Perform reflective actions to improve the quality of learning (Hendriani, 2018). In addition, teachers are accompanied to train themselves in the development of deeper reflective abilities, namely the ability of mental processes, reasoning skills, problem-solving skills, and the ability to listen and interpret values (Pellegrino & Hilton, 2012).

The efforts made include four steps taken, namely: (1) The teacher is invited to feel and determine what difficulties are fundamentally experienced from direct experience, then the teacher is asked to make the first note experienced; (2) Determine the location and limits of difficulties, after understanding the problem, then participants are accompanied through activities to sharpen the root of the problem to solve the problem; (3) Alternative problem solving, teachers are invited to discuss with other teachers; and (4) The development of reasoning, this activity is a continuation of alternative problem-solving activities, and in small groups, it is carried out the development of reason

aimed at sharpening the power of reason to produce the best problem-solving solution of existing ideas as a solution to problem-solving.

CONCLUSION

Based on the results and discussion above, lesson study can improve teachers' pedagogic competence in implementing literacy in learning at SMK Negeri 3 Tangerang Selatan, Banten Province. This can be seen from the average score in the pre-action category of 63 or enough category, an increase in the first cycle of 80 or the good category, and a significant increase in the second cycle of 92 or the very good category. It is proven that there is an increase in the average score of 28. Classically, the percentage of teacher pedagogic competence in pre-action was 37%, increased in cycle I by 83%, and increased significantly in cycle II by 100%. It is proven that there is an increase in the classical percentage of 63%.

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