

Efforts to Improve Numeracy Literacy Culture and History Learning Outcomes with the Problem-Based Learning Method for Class XII IPS 2 at SMAN 6 Metro

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Abstrak

Penelitian ini bertujuan untuk mendeskripsikan metode *problem based learning* pembelajaran sebagai upaya meningkatkan literasi numerasi dan hasil pembelajaran sejarah. Analisis data penelitian ini menggunakan analisis data yang diperoleh melalui tiga tahapan yaitu: (1) reduksi data, (2) penyajian data, dan (3) penarikan kesimpulan (verifikasi data). Sumber data diperoleh dari data primer dan data sekunder. Alat dan pengumpulan data dengan teknik tes dan non tes. Hasil dan pembahasan: literasi numerasi peserta didik kelas XII IPS 2 SMAN 6 Metro hal ini dapat dijelaskan sebagai berikut: prasiklus 58%, siklus I menjadi 72%, siklus II meningkat menjadi 85%, dan siklus III menurun 84%. Sedangkan hasil belajar meningkat, hal ini dari hasil prasiklus rata-rata 52,22%, siklus I menjadi 70,37%. Siklus II menjadi 78,51, siklus III meningkat menjadi 85,92%. Ketuntasan belajar pada prasiklus masih 0, pada siklus I terdapat 40,74%, siklus II 81,48%, dan siklus III menjadi 100%.

Kata kunci: Literasi Numerasi, Hasil Belajar, Metode PBL.

Abstract

This study aims to describe problem-based learning methods as an effort to improve numeracy literacy and history learning outcomes. Data analysis in this study used data analysis obtained through three stages, namely: (1) data reduction, (2) data presentation, and (3) drawing conclusions (data verification). Source of data obtained from primary data and secondary data. Tools and data collection with test and non test techniques. Results and discussion: the numeracy literacy of class XII IPS 2 students of SMAN 6 Metro can be explained as follows: pre-cycle 58%, cycle I became 72%, cycle II increased to 85%, and cycle III decreased to 84%. While learning outcomes increase, this is from the average pre-cycle results of 52.22%, and cycle I become 70.37%. Cycle II became 78.51, cycle III increased to 85.92%. Learning completeness in pre-cycle is still 0, in cycle I there is 40.74%, cycle II is 81.48%, and cycle III is 100%.

Keywords: Numerical Literacy, Learning Outcomes, PBL Method.

INTRODUCTION

The essence of learning history with an explanation of the past of human life which is limited by space and time will become a meaningful and valuable lesson in the present and the future (Hakim, 2015; Kaliappen et al., 2021; Takenaka & Soga, 2019). However, thinking about history will shape students to love the history of their nation more (Aman, 2011; Basri et al., 2022; Bunari et al., 2023;

Cintatia Salsabila, 2018). Learning history should be done by optimizing the resources available at school, including the school environment, internet media, newspapers, and peers (Fadli et al., 2022; Sopacua et al., 2020; Suarno et al., 2022; Waffak et al., 2022). Based on the results of observations of history learning, the following data were obtained: the number of students in class XII IPS 2 was 27 people consisting of 16 boys and 11 girls. In this

regard, literacy and numeracy learning is fun because it can utilize good learning resources, and makes the learning atmosphere cheerful and fun (Henriksen et al., 2020; Ilishkina et al., 2022; Kirk & MacPhail, 2002; Permatasari et al., 2019; Rohman et al., 2021).

In accordance with this connection Agustina and Sulistyowati say the following: The current learning process is nothing more than a pedagogical ritual that contains uninteresting discourse, and does not facilitate students to develop their full potential so that they become lifelong learners (Agustina et al., 2022; Sulistyowati et al., 2019). Furthermore, Nussbaum and Warsah said learning through experience (learning by doing) in the form of exploration and manipulation will make something learned to be remembered for a long time (long-term memory) (Nussbaum et al., 2021; Warsah et al., 2021).

While Sardiman gives the opinion that learning is a complex activity, after learning people will have skills, knowledge, attitudes, and values (1) stimulation that comes from the environment, (2) cognitive processes carried out by students” (Sardiman, 2007, 2015).

Referring to this, to create a culture of literacy and numeracy, it is necessary to take steps including schools providing learning resources, reading sources in all corners that are easily accessible to

students, and providing hotspot service areas as learning resources. Learning with problem-based learning in question is applying problem-based historical learning methods and/or various inonavi providing guidance, and assistance step by step then reduced gradually after students begin to understand the learning topics given (Alper & Deryakulu, 2016; Permatasari et al., 2019; Sirait et al., 2021; Suhirman et al., 2020; Suparman et al., 2021).

In this regard, the application of the Problem-Based Learning learning model in history learning in class XII IPS 2 is problem-based learning by using various kinds of intelligence needed to carry out confrontations with real-world challenges, and the ability to deal with everything new and existing complexities. Judging from the theory of this study explains that the Problem-Based Learning model (historical subject) in schools shows positive results on the quality of learning, especially history. In this regard, the Problem-Based Learning method for students in class XII IPS 2 SMAN 6 Metro.

The author has put it into practice by utilizing sources from the web to make it into history learning media. The sources that have been obtained are made into historical display boards. Based on the identification of the problem, the problem can be formulated as follows:

- (1) To what extent is the implementation of the Problem-Based Learning method in learning

history in class XII IPS 2 SMAN 6 Metro for the 2018/2019 academic year.

- (2) How is the implementation of literacy and numeracy culture in history learning for students in class XII IPS 2 SMAN 6 Matro for the 2018/2019 academic year.

To solve the problem and achieve the research objectives, supporting theories are used related to numeracy literacy with problem-based learning.

Numerical literacy is the ability to read and write, increase knowledge and skills, think critically in solving problems, as well as the ability to communicate effectively which can develop potential and participate in community life. The product of literacy activities is in the form of writing, an intellectual legacy that was not found in prehistoric times. Writing is in the form of inherited historical records.

As implied in Permendikbud number 23 of 2015, the purpose of literacy in schools includes; (1) Fostering a culture of literacy in schools, (2) Increasing the capacity of residents and the school environment to be literate, (3) Making schools fun and child-friendly learning park so that school members are able to manage knowledge, (4) Maintaining continuity of learning by presenting various reading books and accommodate various reading strategies. The School Literacy Movement (GLS) is the ability to access, understand, and use something

intelligently through various activities, including reading, viewing, listening, writing, and or speaking.

The School Numeracy Literacy Movement is an effort to stimulate the participation of all school members (students, educators, education staff, school principals, supervisors, school committees, parents/guardians of students, academics, book publishers, and policymakers all aim to spur interest in reading. The Movement is solely to educate the life of the nation towards a Growing Indonesia, Advanced, and Great Indonesia. The school numeracy literacy movement to become lifelong learners (the long life of education) with the objectives of:

- (1) Growing a school numeracy literacy culture
- (2) Increasing the capacity of citizens and the school environment to be literal
- (3) Making the school a fun and child-friendly learning park that is able to elicit knowledge
- (4) Maintaining the continuity of learning by presenting a variety of readings and providing various reading strategies.

In this regard, the guidebook for the national numeracy literacy movement issued by the Ministry of Education and Culture describes the dimensions of literacy itself into 6 things as follows: (1) Reading and Writing Literacy Read and

write literacy, (2) Numerical Literacy, (3) Scientific Literacy, (4) Digital Literacy, (5) Financial Literacy, and (6) Cultural and Citizenship Literacy Cultural literacy and citizenship.

In this regard, initially, numeracy literacy was defined as literacy which then developed into literacy or skills in reading and writing. Based on this opinion, the culture of numeracy literacy implies literacy or reading culture which refers to lifelong learning, namely when, where, and by whomever. According to this opinion, the numeracy literacy component consists of:

- (1) Basic Literacy, namely the ability to listen, speak, read, write, and calculate related to analyzing.
- (2) Library Literacy, namely providing an understanding of how to distinguish between fiction and non-fiction reading, utilizing reference and periodical collections, understanding catalogs, etc.
- (3) Media Literacy, the ability to know different forms of media such as print media, electronic media, and digital media.
- (4) Technology Literacy, the ability to understand the completeness of following technology (hardware and software) as well as the ethics and etiquette of using technology.
- (5) Visual Literacy, an advanced level of understanding between media literacy and technology literacy,

developing learning needs abilities by utilizing visual material.

This study suggests that numeracy literacy culture is a process of building information through reading, both from text/book sources and from other sources. A culture of literacy and numeration really needs to be encouraged so that students and all school members create it in synergy.

METHOD

The research was conducted at SMAN 6 Metro, class XII IPS 2 with a total of 27 students in the 2018/2019 academic year. Sources of research data were obtained from attendance, daily test scores, results of student worksheets, respondents as research subjects, and collaborators as partners, who were used as data sources in the field during research activities.

Data collection techniques and tools using test and non-test techniques (Habibi et al., 2020; Pratama et al., 2022; Uygun & Arslan, 2020; Wibowo et al., 2020). Tests are used to see the success of learning Indonesian, and non-tests use observation and documentation. Judging from this opinion, the analysis of the data was obtained through three stages, namely (1) data reduction (2) data presentation, and (3) drawing conclusions (data verification).

The implementation of the action research was carried out at SMANe 6 Metro in class XII IPS 2 odd semester of the

2018/2019 school year. In research activities the author observed activities with observation sheets at each meeting, using 3 cycles. The process of learning Indonesian is carried out in cycles, each cycle consisting of planning, implementing actions, observing, and reflecting with the time used for 2 meetings (2x45 minutes) for each cycle. The action research procedure consists of 4 stages, namely: (1) the planning stage, (2) the acting stage, (3) the observing stage, (4) reflecting.

RESULTS AND DISCUSSION

Classroom action research was conducted in class XII IPS 2 SMAN 6 Metro. Based on the research results obtained the following data:

A. In Cycle I

The Problem-Based Learning method in improving the numeracy literacy culture of class XII IPS 2 students of SMAN 6 Metro is as follows: (1) the indicator of the need for reading in pre-cycle scores 51, in cycle I become 77, there is an increase of 26%, (2) effort seeking to read in pre-cycle gets a score of 59, in the cycle, I become 71, an increase of 12%, (3) enjoyment of reading pre-cycle gets a score of 65, in the cycle, I become 72, increases by 7%, (4) the desire to always read pre-cycle got a score of 54 in cycle I to 69, an increase of 15%, and (5) the follow-up of what was read pre-cycle got a score of 60, in cycle I it became 69, an increase of 9%. The overall average increase amount is 69%.

The increase in average learning outcomes was 18.15 from 52.22 in the pre-cycle to 70.37 in the first cycle. The lowest value was 30 in the pre-cycle, and in the first cycle 40, an increase of 10. The highest value was 70 in the pre-cycle, in the first cycle it became 80, an increase of 10. Completed learning 0, which has not been completed 27, in the first cycle to 11 (40.74%). Reflection: an average increase of 18.15 from 52.22 in pre-cycle to 70.37 in cycle I show the effect of an action on the achievement of history learning outcomes for students of class XII IPS 2 SMAN 6 Metro.

B. In Cycle II

The Problem-Based Learning method in improving the numeracy literacy culture of class XII IPS 2 students of SMAN 6 Metro is as follows: (1) an indicator of the need for reading in cycle I score 77, in cycle II it becomes 84, there is an increase of 7%, (2) search for reading in cycle I got a score of 71, in cycle II it became 85, an increase of 14%, (3) enjoyment of reading cycle I got a score of 72, in cycle II it became 90, an increase of 18%, (4) the desire to always read cycle I got a score of 69, in cycle II it became 83, an increase of 14%, and (5) the follow-up of what was read in cycle I got a score of 69, in cycle II it became 83, there was an increase of 14%. Study results: an average increase of 8.14 from 70.37 in cycle I to 78.51 in cycle II. The lowest value is 40 in cycle I, and to

cycle II 60, there is an increase of 20%. The highest score was 80 in cycle I, in cycle II it became 90, an increase of 10. Completed learning in cycle I was 11 (40.74%), in cycle II it became 22, an increase of 11% of students. Reflection: the actions taken in cycle II, have provided an increase in learning outcomes. Even though it is getting better, it has not yet reached the expected indicators, namely at a score of 78.

C. In Cycle III

The Problem-Based Learning method in improving the numeracy literacy culture of class XII IPS 2 students of SMAN 6 Metro is as follows: (1) an indicator of the need for reading in cycle II gets a score of 84, in cycle III it becomes 85, there is an increase of 1%, (2) search for reading in cycle II scored 85, in cycle III became 81, decreased by 4%, (3) enjoyment of reading cycle II scored 90, in cycle III became 92, increased by 1%, (4) the desire to always read cycle II got a score of 83, in cycle III it became 81, decreased by 2%, and (5) the follow-up of what was read in cycle II got a score of 83, in cycle III it became 82, there was a decrease of 1%. Learning outcomes: the average increase was 7.41, from 78.51 in cycle II to 85.92 in cycle III. The lowest value is 60 in cycle II, and to cycle III 80, there is stagnation. The highest value was 90 in cycle II, in cycle III it became 100, and there was an increase

of 10%. Completed learning 22 (81.48%), of which 5 were not completed in cycle II, in cycle III it became 27 (100%). Reflection: The average increase of 7.41 from 798.51 in cycle II to 85.92 in cycle III shows the effect of the action on the achievement of history learning outcomes for students of class XII IPS 2 SMA Negeri 6 Metro. The actions taken in cycle III have resulted in an increase in numeracy literacy results and learning outcomes and have achieved more than the expected score of >78. The implementation of learning with the Problem-Based Learning model has been fully able to improve learning outcomes by being more active in studying history.

CONCLUSION

Based on the description in the discussion, the following conclusions can be drawn: (1) Learning history with the Problem-Based Learning method becomes more fun, and challenging, and creates a joyful atmosphere. This can be seen by increasing learning participation. The results of numeracy literacy in pre-cycle history learning were 58%, cycle I became 72%, cycle II increased to 85% and cycle III became 84%. (2) The results of studying history are as follows, the average pre-cycle gets 52.22%, the first cycle becomes 70.37%, the second cycle gets 78.51% and the third cycle becomes 85.92%. Pre-cycle learning completeness had not been achieved, cycle I increased to 40.74%,

cycle II to 81.48%, and cycle III increased to 100%. The Problem-Based Learning method can improve the culture of numeracy literacy and history learning outcomes for class XII IPS 2 odd semester SMAN 6 Metro in the 2018/2019 academic year. Thus the application in learning the history of the Problem-Based Learning method for class XII IPS 2 odd semester SMAN 6 Metro for the 2018/2019 academic year is getting better and increasing.

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