

THE IMPLEMENTATION OF SCRAPBOOK AS A MEDIA TO TRAIN STUDENTS' SCIENCE LITERACY IN STATIC FLUID

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Abstract

The research aims to describe science literacy learning and student's learning response toward implementation of the scrapbook as a media to train science literacy in the static fluid. The type of research is Pre Experimental with One-group pretest-posttest design. The samples in this research are students of experiment class. Observation sheet, questionnaire, and documentation guidance are used to collect data. Observation analyzed to describe science literacy learning and questionnaire response. Based on the data analyzed, the implementation of the scrapbook as media was done very well. Student's response to the implementation of the scrapbook as a media had good criteria.

Keywords: Scrapbook, Literacy science, student's learning response.

Abstrak

Penelitian ini bertujuan untuk mendeskripsikan keterlaksanaan pembelajaran dan respons peserta didik setelah diterapkan media *scrapbook* materi fluida statis untuk melatih literasi sains. Metode penelitian ini berupa Pre Eksperimental dengan desain penelitian *One-Group Pretest-Posttest*. Subjek penelitian ini adalah peserta didik kelas eksperimen. Teknik pengumpulan data dengan menggunakan instrumen berupa angket observasi keterlaksanaan pembelajaran, angket dan dokumentasi. Data yang diperoleh dari kemudian dianalisis dengan analisis pengamatan keterlaksanaan pembelajaran dan skor angket respons. Berdasarkan analisis data, dapat disimpulkan bahwa keterlaksanaan pembelajaran terlaksana sangat baik dan peserta didik merespons dengan baik setelah diterapkan media pembelajaran scrapbook pada materi fluida statis untuk melatih literasi sains.

Kata kunci: *Scrapbook*, Literasi sains, Fluida statis

INTRODUCTION

Education is one of the most important aspects of a country and as an indicator of a country that can be categorized as developed or developing countries. Indonesia currently developing countries who have some constraints in education. It is literacy skills, especially scientific literacy.

Scientific literacy is a person's ability to understand, communicate, apply scientific knowledge to solve problems in the surrounding environment. It is considering a statement by (Dewi, 2018) that the definition of literacy and the nature of the physics are the study has knowledge of the environment and natural phenomena.

PISA (Programme for International Student Assessment) carried out by international organizations OECD (Organization for Economic Cooperation and

Development) which verifies the performance of the 15-year-old student to their test of reading, mathematics, and science. In 2012, PISA report that Indonesia was received 382 points, 403 points in 2015. As we know it is classified that the point lower than the other countries. The international point is 500 (OECD, 2016).

The factors that may affect the low literacy of science are the education system used today, the curriculum, methods, and learning models. Therefore, the process of reforming and renewing the education in Indonesia should be done (Arifin, 2017).

Based on the results of the PISA report, the 2013 curriculum emphasizes scientific literacy, it can also provide an opportunity to apply the knowledge to be able to solve daily life problems. 2013 curriculum has three aspects, as shown in Figure 1.

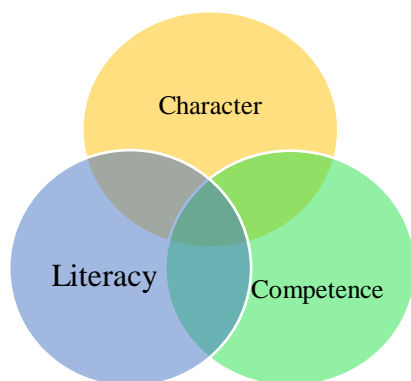


Figure 1. The achievements aspect of Curriculum 2013

Based on Figure 1. The character consists of faith and piety, love the country, curiosity, initiative, persistence, adaptability, leadership, social and cultural awareness. Competencies include all the related critical thinking/problem solving, creativity, communication, and collaboration. While the literacy aspect consists of literacy, numeracy, science literacy, information literacy and communication technology, financial literacy, cultural literacy, and citizenship.

Literacy skills related to learning activities, especially in the physical sciences, all we know is the study of nature. Science can be trained by linking science literacy to physics material. Science literacy skills Important to be taught to students, learning has rejected measuring the skills of Science literacy, students can improve knowledge and Skills to solve problems in daily life related to Science (Shellawati, 2018). The learning activities are the process of receive and add information between teachers and students. One of the learning models is Problem Based Learning (PBL).

The essence of Problem Based Learning (PBL) is presented a problem that is in accordance with reality and meaningful to the learner to be investigated openly and find solutions (Wisudawati and Sulistyowati, 2014).

Beside the learning model Problem-Based Learning, learning media were required. Learning media can be a process of learning such as help to students' interest in learning, and retention of the material learned very well. One of the learning media is Scrapbook.

Scrapbook is an attached art decoration on paper and make it as a scrapbook. Scrapbook not only used as an art course but also can be used as a medium of learning.

Scrapbook in (Phillips, 2007); "Scrapbooks encourage students to see the science all around them and Realize that is truly relevant in their lives outside of school. Scrapbooks will increase student understanding of the scientific concepts by Relating them to Reviews their own interests and experiences, resulting in a greater desire and excitement to learn. "

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Scrapbook as a learning media were containing pictures and explanations of the Archimedes principle in daily life.

Based on the description, researchers carry out "The Implementation of the scrapbook as a media to train students' science literacy in fluid static".

METHOD

The type of research is a pre-experimental design with one group pretest-posttest design.

$$O_1 \rightarrow X \rightarrow O_2$$

Figure 2. Research design
(Sugiyono, 2012)

Information :

O_1 : Pre-test

X : Science literacy using Scrapbook

O_2 : Post-test

Based on research design pre-test to determine initial achievement student's science literacy. Post-test to determine the achievement of students' science literacy after treatment.

RESULTS AND DISCUSSION

This study was obtained by the implementation of learning Scrapbook as a media and students response.

Implementation of learning scrapbook is used to check the success of teachers in each phase. The average of the implementation as shown in Table 1.

Table 1. The Result of average implementation scrapbook as a learning media

No.	Aspects	Average
1	Learning Media	3.7
2	The composition of the class	3.2
3	Observation Learning (Arends, 2012)	
	Introduction	
	Phase 1 Orient students to the problem	3.8
	Activities	
	Phase 2. Organize students for study	3.6
	Phase 3 Assist independent and group investigation	3.3
	Phase 4 Develop and present artifacts an exhibits	3.7
	Closing	
	Phase 5 Analyze and evaluate the problem solving process.	3.5

No.	Aspects	Average
Average		3.6

Table 1 shows that the average implementation of the scrapbook as a learning media that was 3.6 which is categorized very well. In addition, there is a process of development and implementation of media Scrapbook. First, teachers giving scrapbook as a learning media, and then teachers develop and present artifacts an exhibits that will be made by the study by the various references, Finally, the students' design scrapbooks and present their artifacts.

Students' response analysis was used to determine the response of students after the implementation of the scrapbook as a learning media. There are questionnaire responses of 10 statements.

Table 2. The Result of average students learning response

Class	Percentage	Category
XI 6	80%	Good

Based on Table 2, Students response to the implementation of the scrapbook as a media got an average response of 80 percent with good criteria.

In relation to scrapbook as a learning media, Aisyah (2017) showed that the implementation of media Scrapbook had an impact on writing Hanzi as many as 25 students acquire an increase of significant value and had good response.

CONCLUSION

Based on the results of analysis and discussion, it can be concluded that the implementation scrapbook as a media to train students science literacy in the static fluid was done very well with an average value was 3.6. The response of students had good criteria.

Based on the researcher during the research, the suggestion that can be given are the application of scrapbook media need to manage as well as possible the allocation of time. In addition, science literacy competence not only explain phenomena scientifically but also the other competencies, such as Evaluate and design scientific inquiry, interpret data and evidence scientifically.

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