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The Implementation of P5 in Learning Science for Class VIII in Junior High School

Regina Atya Gading Balgis Solikha[1], Sri Wilujeng Toyibatul Anisa[2], Alisa Amanda Putri[3], Vidya Mandarani[4*]
[1]Science Education Study Program, Universitas Muhammadiyah Sidoarjo, Indonesia
[2]English Education Study Program, Universitas Muhammadiyah Sidoarjo, Indonesia *Corresponding Author Email: vmandarani@umsida.ac.id

Abstract. *In this study which aims to analyze P5 activities at SMP Negeri 1 Wonoayu with the theme of local wisdom, which includes the preparation stage which provides findings that the Junior High School provides training to all teachers every month to develop their abilities, so that teachers at this Junior High School can implement P5 well. At the implementation stage, P5 activities at this Junior High School are carried out every Tuesday with different themes. This research uses a qualitative method using descriptive research. In collecting data, the techniques used were interviews, field observations and documentation of activities. Interviews were conducted to find out more in-depth things about P5 activities that could not be found through observation. Documentation includes notes during research, other documents, and photos as documents that support evidence of research implementation and to complement research data. The subject of this research is science learning in the independent curriculum. In obtaining the data through several school parties, namely the lead teacher, facilitator teacher and P5 team, and several students involved in the implementation of P5 activities. The data analysis technique used is the Milles and Huberman model in (Rijali, 2018). This research applies differentiated learning to the independent curriculum in obtaining data from the deputy principal, academy, facilitator teachers, as well as the P5 team, and several students involved in implementing P5 activities in the independent curriculum. The results of this study have a stage where the first stage of P5 implementation is carried out in two weeks where students are given material and practice democracy in the classroom and school scope. At the evaluation stage, the principal and facilitator hold a meeting that discusses the obstacles faced and provides solutions or reflections for the day of the P5 meeting. The second stage is the implementation of differentiation that has been successfully carried out for P5 activities in the content differentiation strategy, the problem process and also produces a product. The third stage in P5 activities that have been carried out as a form of differentiated learning in the independent curriculum has a good impact on character building, especially on students in democracy that is close to students in accordance with the profile of Pancasila students.*

Keywords - *Independent Curriculum, P5 Implementation, in Junior High School*

I. INTRODUCTION

National education in accordance with System Law Number 20 of 2003. Article 3 of the National Education Act seeks to help students reach their full potential so they can become human beings who are obedient to God Almighty, of noble character, healthy, intelligent, capable, creative, independent, and who will grow up to be democratic and responsible members of society (Sisdiknas, 2003). And at this time education in Indonesia is undergoing changes in curriculum policy from the 2013 curriculum to the independent curriculum. The purpose of this curriculum change is to answer various problems of future challenges in mastering science, attitudes, and skills so that they are able to adapt to the environment (Rahmadhani et al., 2022). There are also several reasons behind this curriculum change, namely first, the results of PISA. The 2018 PISA results released in December 2019 were followed by 79 countries. Indonesia is in the bottom 10, namely literacy in position 74, numeracy in position 73, while science is in position 71 (Schleicher, 2019). The second reason is that the COVID19 pandemic causes learning loss. In accordance with the results of Maulyda et al.'s research, (2021) it was found that learning loss had occurred as seen from the learning outcomes had decreased, because students studied at home and the teacher did not adapt the learning process plan and the learning activities only lasted 30 minutes per subject.

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This independent curriculum prioritizes students to develop character. Implementing P5 or Pancasila lessons, the implementation of P5 is one of the applications of differentiated learning where there is an adjustment to the interests, learning preferences and readiness of students in order to achieve improved learning outcomes. Differentiated learning views that learners are dynamic or not the same (Marlina, 2019). The purpose of P5 activities is to develop learners' skills to produce a project tailored to the Pancasila Learner Profile (Saraswati et al., 2022). With that, the independent curriculum has 2 learning structures, the first is intraculicular learning and also a project to strengthen the Pancasila profile where PBL prioritizes a studying process that utilizes project activities as the core activity in the implementation of learning (Fahira et al., 2022). Next, Rati et al. (2017) clarified that project-based learning is a paradigm that stresses the capacity to learn on one's own by resolving issues and completing a project or actual task.

With this project learning, students can be creative and also active in learning, so that student character can develop and the ability to think can be even more creative with this learning. P5 learning has 4 principles, namely, (1) holistic means that learning is carried out as a whole and as a whole. (2) contextual means that students learn based on real experiences that occur around them. (3) learnercentered and (4) explorative, where educators support students to explore all information that can be used as learning (Kemendikbud RI, 2022). As stated by Pramono (2020) “implementation is a process of activities carried out by various actors so that in the end it will get a result that is in accordance with the objectives or suggestions of the policy itself.” So this implementation already exists in all schools, which have various and types of learning that are used for students[10].

Students must be able to solve problems in order for P5 to be implemented. Which can design, make decisions, solve problems, conduct investigations, make conclusions, and provide students to work together (groups) and also individually. In one of them in the subject of Natural Sciences (IPA) where students are guided to do learning in a laboratory or can also be called learning outside the classroom (Laboratory). Students can also do this learning as project material which is the problem to be solved. Science learning itself has a learning method, namely the textbook method, audio visual learning method and also the practicum method, this learning applies so that students have thoughts about problems and are more creative.

Based on observations at the Junior High School (SMP), the independent curriculum has been implemented in all grade VIII classes. This program is newly implemented where students can adapt to the independent curriculum, and the obstacles experienced by the teachers themselves are learning tools because this learning uses media so that elderly teachers who still have not mastered learning tools have difficulties. However, this independent curriculum does not always teach students to always learn in the classroom but outside the classroom as well. Students need to acquire more than only the knowledge and abilities necessary for learning. One of these involves P5 instruction that reinforces Pancasila-compliant principles in kids. The process of reinforcing the acquired character into the everyday execution is what matters, not the finished outcomes which serve as a means of evaluating the effort. Thus, the question posed by this study is: How might P5 be used to help junior high school students learn science in class VIII?

II. METHOD

This study employs a qualitative methodology using a descriptive research design. The explanation of the influence of P5 as part of science learning is described based on information collected through

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observation, interview and documentation techniques. Observation was conducted as observing various documents during P5 activities in the field, namely in junior high schools. Interviews were conducted to find out more in-depth things about P5 activities that could not be found through observation. Documentation includes notes during the research, other documents, and photos as documents that support evidence of research implementation and to complement research data. The independent curriculum's science education is the focus of this study. Various school parties, including the lead teacher, facilitator teacher, P5 team, and various students who participated in carrying out P5 activities, were involved in gathering the data.

The method of data analysis employed is the Milles and Huberman model in (Rijali, 2018), which outlines the steps involved in doing an analysis, including gathering data, reducing data, presenting data, and deriving or verifying conclusions[11]. The instruments used in this study were interview sheets with the lead teacher, facilitator teacher and P5 team, and several students involved in the implementation of P5 activities regarding the batik eco-print project.

III. RESULTS AND DISCUSSION

A. Research Results

Based on the findings of the researchers' observations and interviews, many junior high schools have implemented a curriculum based on the Permendikbud regarding the implementation of an independent curriculum in the 2022/2023 academic year starting from grade 7 and grade 8.

The implementation of this independent curriculum designs an activity called P5 or the Independent Curriculum Project which is closely related to differentiated learning where students are given the freedom or container according to the ability of students in increasing the potential possessed by students. In this P5 activity, it includes several stages, starting from the preparation stage, the implementation stage, and the evaluation of P5 activities at the Junior High School. a) Preparation Stage

P5 activities are a program in the independent curriculum that is closely related to the implementation of the three elements of studying, namely intracurricular, extracurricular, and cocurricular.

Figure 1. Personal Documentation, Interview with Pamong Teacher

In obtaining relevant data, the researcher also conducted interviews with the supervising teacher for PLP 1 activities and several Science teachers regarding the preparations made regarding the implementation of P5 in the class he taught.

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The preparation made by the teacher in applying P5 in learning Natural Sciences of course begins with understanding the learning objectives and competencies to be achieved, compiling the material to be taught and planning for student performance assessment. Then the teacher also prepares various learning resources such as teaching material books, or makes the material packaged with more fun such as matching pictures about the material being taught, so that students are also more enthusiastic in participating in these studying activities. In addition, teachers at this junior high school also receive training every month to develop their skills, so that they can implement P5 at school well. From these several things, the preparations made by several teachers, especially teachers of Natural Science subjects at this Junior High School in implementing P5 can be said to be within the percentage range, which is pegged at 70% before the implementation of P5.

b) Implementation Stage

It was found that in the implementation stage of P5 in junior secondary schools, daily blocks are used. In one of these junior high schools, daily blocks are carried out on every Tuesday with different themes. The implementation stage of P5 in this junior high school can be said to have been conceptualized, namely by preparing detailed activities to the outcomes produced in P5 activities. On April 30, 2024, one of the VIII classrooms carried out a P5 project, namely "ecoprint".

Figure 2. Personal Documentation, Ecoprint process by class VIII students

Figure 3. Personal Documentation, Ecoprint process by class VIII students

The implementation of the ecoprint project was carried out individually and in groups. On Tuesday, April 30, 2024, the students individually brought various plants around their place of residence. And they printed the plants on various types of shirt fabrics, totebags, or hijab fabrics that they had prepared. The process is done by putting the plant on the cloth that has been prepared, then on top of the plant is coated with plastic, then the plastic layer of the plant is hit with a stone or other hitting tool until the motif of the plant is obtained. After the hitting process is complete

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and the resulting motif is in accordance with the plant, the cloth is dried in the sun or dried. And for group assignments, students print the plants on their respective group fabrics. The technique is the same as the individual project, starting from hitting the plant on a cloth covered with plastic, then the cloth is dried, after drying the cloth is soaked with water that has been mixed with alum or what is called the fixation process, which is to lock the color of the plant printed on the fabric so that it does not fade and remains clearly visible.

c) Evaluation Stage

The implementation of P5 in Junior High School, especially in the learning of Science in class VIII, faces several challenges. The main challenge faced is the diversity of learner characteristics and abilities. To overcome this challenge, teachers conduct a comprehensive evaluation, which not only aims to identify obstacles but also to assess the achievement of learner skills and competencies.

This evaluation involves several assessment steps to provide constructive feedback and assist learners in developing the expected skills. The stages of evaluation applied are in the form of assessment rubrics and assessment plans. The assessment rubric, teachers use an assessment rubric to evaluate various important aspects in P5, especially in science learning. The components assessed include: a) Practical Skills, in which in this assessment the teacher assesses the ability of students to carry out practicum, as well as the correct use of tools and materials; b) Teamwork, in this case the teacher assesses and evaluates related participation, communication, and collaboration between group members in project or practicum activities. Assessment plan, teachers design this to provide a comprehensive picture of the development and achievement of the learners themselves. This includes formative and summative assessment. Formative assessment, this assessment is carried out periodically during the learning process which includes daily worksheets, group discussions. Summative assessment, this assessment is usually carried out at the end of the learning period such as group work presentations. Through these stages of evaluation, teachers can provide effective mentoring and ensure that each learner gets the necessary support to develop each learner's skills and competencies in accordance with P5 objectives.

B. Discussion

Based on the results of research at this Junior High School, it has implemented the Merdeka Curriculum in accordance with the Permendikbud regarding the implementation of the curriculum in the 2022/2023 academic year. This implementation starts from grades 7 and 8. The infrastructure and curriculum modules of the school are prepared to facilitate the execution of the Merdeka Curriculum.

According to the results of interviews with teachers in charge of Natural Science subjects at school, the Merdeka Curriculum implemented includes P5 project activities. The application of P5 in science learning provides opportunities for students to develop skills such as analysis, problem solving, and practical skills. This is in line with the opinion of the science teacher we interviewed who stated that the Merdeka Curriculum, through P5 activities, can facilitate the development of students' skills in a more practical and contextual context.

Based on the findings of the science teachers' interviews, they also stated that the application of P5 in learning Natural Sciences at the Junior High School has a positive impact, such as fostering a

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sense of empathy and mutual cooperation through practicum activities and group assignments. However, the main challenge faced is the different characteristics and abilities of students. Teachers must be able to adjust studying approaches and strategies to meet the individual needs of each learner, which in the context of P5, the role of the teacher as a facilitator is very important.

To compare with other research results, a case study conducted by Sari (2023) in SMP Negeri 2 Surabaya showed that the implementation of P5 in Science Learning also had a similar positive impact[12]. However, the study found that the main obstacle lies in the limited resources and time teachers have to develop truly interactive and in-depth projects.

According to the theory expressed by Purwanto, A. T. (2022), P5 is designed to strengthen the learner profile of Pancasila by emphasizing character development and 21st century skills through a project-based learning approach[13]. This theory is relevant to the findings in the Junior High School where the research has been conducted, where the development of practical skills and character is the main focus. The similarities between these two studies show that the challenges faced are not only local but also general, related to the implementation of Merdeka Curriculum in various schools.

The main difference found in the implementation in this Junior High School compared to other studies is the better prepared infrastructure and learning modules. This gives this Junior High School an advantage in the implementation of P5, so that they can overcome some of the obstacles that may be faced by other schools that do not have the same readiness. So it can be said that the implementation of P5 in this Junior High School has shown positive results in science learning, although there are still challenges that must be faced. Where the readiness of infrastructure and learning modules, as well as the role of teachers as facilitators are key factors in the successful implementation of P5.

IV. CONCLUSIONS

Considering the discussion of study results, it can be concluded that the implementation of P5 activities in Natural Science Learning at the Junior High School with the theme of local wisdom includes the preparation stage which provides findings that the Junior High School provides training to all teachers every month to develop their abilities, so that teachers at this Junior High School can implement P5 well. At the implementation stage, P5 activities at this Junior High School are carried out every Tuesday with different themes. At that time, the implementation of P5 in class VIII in learning Natural Sciences was ecoprint. At the evaluation stage, teachers conduct a comprehensive evaluation, which not only aims to identify obstacles but also to assess the achievement of learner skills and competencies. The evaluation involved several assessment steps to provide constructive feedback and assist learners in developing the expected skills.

The effect of implementing P5 in Science learning is very positive on students. There is an increase in mutual empathy, cooperation between students and a place for students to develop the abilities, creativity, and skills of each learner. Although there are obstacles that are also faced by teachers, namely the difficulty in dealing with students. Where each learner certainly has different abilities and characteristics so that teachers also need to provide effective assistance and ensure that each learner gets the support needed to develop the skills and competencies of each learner as the role of the teacher as a facilitator which is a key factor in the successful implementation of P5.

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