



## Development of P5 Module Based in Experiential Learning “Recycling Plastic Waste” of the Theme of Sustainable Lifestyle for Elementary School Students

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### ABSTRACT

*This research and development aims to develop a P5 Module Based on Experiential Learning "Recycling of Plastic Waste" on the Theme of Sustainable Lifestyle for Elementary School Students which is very valid and practical. The type of research used is Research and Development (RnD) with the ADDIE (Anlyze, Design, Development, Implementation, and Evaluation) development model. The data collection techniques in this study are in the form of questionnaires and documentation. This research uses validity and practicality analysis techniques. The results of the three validators got the following percentages: linguists got a percentage of 85%, material experts got a percentage of 82%, and media experts got a percentage of 83%, by meeting the "very valid" criteria. The P5 module was also declared practical which can be proven through interviews with class teachers about the P5 module and proven through a one-to-one trial conducted by 3 students who obtained an average percentage of 82.67%. with the criterion of "very practical", and the small group trial was carried out by 8 students with an average percentage of 85% with the criterion of "very practical". It can be concluded that the Experiential Learning-Based P5 Module is very valid and practical to be used as a teaching material in the P5 learning "Plastic Waste Cycle" on the Theme of Sustainable Lifestyle for Grade V Students of SD Negeri 4 Rimau Island for the 2025/2026 academic year.*

## 1. Introduction

Education is a process of imparting skills, knowledge, and habits that are passed down from one generation to the next through training, teaching, and evaluation. Aside from developing the potential of students, education also aims to shape their character, so that they are expected to become a smart, virtuous, and morally upright generation (Sulistiyaningrum & Fathurrahman, 2023, p. 122). Character education is part of the educational process that aims to introduce character values to students, encompassing knowledge, awareness or will, and actions to realize those values. Educators with character are those who possess values and beliefs grounded in the

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essence and purpose of education, which serve as a moral force in carrying out their duties as educators. Character education is often referred to as value education, because character is essentially values manifested in actions (Setiyanti, Herfiyanti, & Nurkolis, 2024, p. 432). According to Ki Hajar Dewantara, in his view, the foundation of education is a process that guides the growth and development of students. (Sulistiyaningrum & Fathurrahman, 2023, p. 122) According to the Independent Learning Curriculum, learning is designed to achieve the formation of the Pancasila Student Profile. The Ministry of Education and Culture, in its vision and mission, emphasizes the importance of the formation of the Pancasila Student Profile. As a concrete step, learning achievement guides for each subject at the elementary school level have been prepared, directly related to the Pancasila Student Profile. In addition, there is a Teaching Campus program that provides insights to students about the Pancasila Student Profile, with the hope that this formation can be realized. According to the Regulation of the Minister of Education and Culture Number 22 of 2020 concerning the Strategic Plan of the Ministry of Education and Culture for 2020-2024, Pancasila Students represent Indonesian students who learn throughout life, possess global competencies, and behave according to the values of Pancasila, with six main characteristics: being devout, pious to the One and Only God, having noble character, appreciating global diversity, cooperating, being independent, thinking critically, and being creative.

The Strengthening Project of the Pancasila Student Profile (P5) is one of the means to achieve the goals of the Pancasila Student Profile, which provides opportunities for students to "understand knowledge" as part of the character strengthening process, as well as opportunities to learn from their surrounding environment. In the activities of the Strengthening Project of the Pancasila Student Profile (P5), students are given the chance to study important issues such as sustainable lifestyles, local wisdom, climate change, mental health, culture, entrepreneurship, Unity in Diversity, and democratic life, which enables them to take real action in addressing these issues according to their learning stages and needs. This project is also governed by the Ministerial Regulation of Education, Culture, Research, and Technology No. 56/M/2022, which states that the Strengthening of Pancasila Student Profiles Project (P5) is a project-based co-curricular activity aimed at strengthening students' competencies and character in accordance with Graduate Competency Standards and Pancasila Student Profiles. In its implementation, this activity involves students in projects based on their experiences and knowledge, and enhances their understanding and skills in internalizing the values of Pancasila. Through P5 activities, students can boost their self-confidence, develop their potential, and discover interests in specific fields. Teachers play an important role as moderators in this activity. P5 activities can be considered as the application of differentiated learning, as they are able to enhance students' skills and stimulate their interest. Thus, the Pancasila Student Profile Strengthening Project (P5) is part of the MBKM program that involves students in the process to develop their abilities, potential, and skills in various fields.

Project-based activities allow students to develop their skills and creativity. According to (Umar & Abdullah, 2020, pp. 39-40), creativity is the ability to create new ideas or methods in producing a product. In addition, creativity also refers to students' abilities to generate new ideas, opinions, and innovative solutions in the learning process. Meanwhile, according to (Wijaya & Nuringsih, 2024, p. 285), creativity is also an important factor in enhancing students' interest and curiosity, particularly regarding their interest in recycling waste, which can stimulate their creativity. Thus, creativity can be understood as the development of students' abilities through their imagination, with direct, real experiences, which ultimately results in new works.

The Experiential Learning Model is a creative and innovative approach that actively involves students in the learning process, where they participate directly in real experiences, making it an appropriate solution to the problems at hand (Gunadi & Prasetyo, 2023, pp. 36-37). The learning

process in Experiential Learning occurs through direct experiences, interaction with the environment, specific situations, or tasks, as well as deep reflection on those experiences (Suleman, 2024, p. 1531). Experiential Learning is a learning approach that emphasizes direct experience and active student involvement in the learning process. This experience-based learning is more easily understood by students because they are directly involved in every step of the learning process, such as in field practices or recycling plastic waste projects.

Waste is the remnants of human daily activities and natural processes that usually takes a solid form. Humans act as producers of waste, continuously generating piles of garbage. Every human activity, whether in large or small cities, always involves the production of waste and refuse. Waste can be divided into two categories: organic waste which can decompose or rot by microorganisms, and inorganic waste which cannot decompose (Asmarawati et al., 2019). One type of waste that is very prevalent in the surrounding environment is plastic waste. Plastic waste is a type of inorganic waste that poses a significant problem for the environment, as its quantity continues to increase, and it is also difficult to decompose naturally or cannot be degraded (Arum, Jumiaty, & Ineza, 2019, pp. 1-2). Plastic waste is also known as a xenobiotic pollutant (which is not recognized by the biological systems of the environment), and can cause accumulation in nature. Various types of plastic waste, such as plastic shopping bags, plastic mineral water bottles, plastic straws, baby diapers, balloons, and others can hinder the process of water absorption into the soil. The negative impacts of plastic waste have even spread to marine waters. Plastic waste in the ocean can be exposed to sunlight, undergoing photodegradation, which breaks it down into small particles that eventually enter the bodies of marine biota (Lestari, Septaria, & Putri, 2020, pp. 43-45). With the existence of this Pancasila student profile strengthening project, it is hoped that students will be motivated to contribute to preserving and caring for the surrounding environment.

The distinguishing factor of the research results compared to previous studies is the research conducted by (Susilawati, Anggrayni, & Kustina, 2023) titled "Development of the P5 Module (Project Strengthening Pancasila Student Profile) Phase B Theme Entrepreneurship in Elementary Schools", which indicates that the developed product is the teaching material for the P5 module phase B theme entrepreneurship. Furthermore, the research conducted by (Juhaeniah, Ali, & Halqi, 2023) titled "Development of Module Projects for Strengthening the Pancasila Student Profile in Building Entrepreneurial Characters of Elementary School Students". The research conducted by (Yuniarti, Karma, & Istiningsih, 2021) titled "Development of Learning Modules Based on Local Wisdom Theme My Dreams Subtheme Me and My Dreams Grade IV". Furthermore, the research by (Hidayah & Zumrotun, 2024, pp. 357-361) with the title 'Utilization of Plastic Waste in the Theme of Sustainable Lifestyles in Strengthening the Pancasila Student Profile Project in Elementary Schools' states that this research results in flower crafts made from plastic that impact the utilization of plastic waste. This project is practically applied in elementary schools as it teaches students to think critically and creatively.

From the research on the development of the P5 module that the researcher previously conducted, there is a novelty in the development of the P5 module that the researcher will create. Here, the researcher takes the title "Development of an Experiential Learning-Based P5 Module 'Recycling Plastic Waste' on the Theme of Sustainable Lifestyle." In this research, the Experiential Learning model is used in phase C with the theme of Sustainable Lifestyle, while in the previous research, the experiential learning model was not used and a different theme and phase were applied. In this Experiential Learning model, students learn through active involvement in real experiences to acquire new knowledge and skills. The researcher adopts this model to encourage

students' creativity in the activity of recycling plastic waste, which will be made into handicrafts. The handicraft is made from Aqua glass waste that produces (tissue holders).

Based on observations with the fifth-grade teacher at SD Negeri 4 Pulau Rimau located on Jl. Rawa Banda, Kec. Pulau Rimau, Kab. Banyuasin, the researcher noted the creativity of the fifth-grade students in that school. From the results of interviews conducted with the fifth-grade homeroom teacher regarding P5 "Waste Recycling" on the Sustainable Lifestyle theme, it was stated that there are students who still appear to be less active and creative in the activity. This is due to the insufficient guidance from educators or examples that could motivate the students.

The reason I chose this title is that the development of an experiential learning-based P5 module on plastic waste recycling is very relevant to be applied in the theme of sustainable lifestyle in elementary schools. This module aims to educate students about the importance of recycling plastic waste and applying it in their daily lives. Through project activities, students can work in groups to study, design, and execute the plastic recycling process, and this activity is conducted in a real manner. Additionally, this activity aims to encourage creativity and develop students' knowledge related to plastic waste management and to utilize waste into crafts, as well as teaching students about the utilization of waste.

Based on the background above, the researcher will study and develop a P5 module on plastic waste, as well as create a craft from that plastic waste, in order to train students to maintain the cleanliness of their environment and encourage students' creativity. Therefore, the researcher titles: "Development Of A P5 Module Based On Experiential Learning 'Recycling Plastic Waste' On The Theme Of Sustainable Lifestyles For Elementary School Students."

## **2. Methodology**

This research uses the Research and Development (R&D) methodology. R&D is an approach used to create specific products and test their effectiveness (Sugiyono, 2022). This method aims to create innovative products that can develop new or existing products, making them more attractive and aligned with the learning objectives of the main concepts being developed (Muqdamien, Umayah, Juhri, & Raraswaty, 2021). The product to be developed in this research is the P5 Module based on Experiential Learning. The development model applied is the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Cahyadi, 2019). The ADDIE model was chosen because its stages are explained in detail, are systematic, and easy to understand, making it very suitable for development research.

## **3. Results**

In the development of this module, this research uses the ADDIE model. This development model has 5 stages, namely: Analysis, Design, Development, Implementation, and Evaluation (Cahyadi, 2019). The steps of the ADDIE model can be seen in the diagram below:

### **a. Analysis Stage**

This stage is conducted to determine and identify the needs in the learning process as well as to gather information related to the product that will be developed.

### **b. Design Stage**

The Design stage is the second stage in the ADDIE model used for designing and developing learning products. In this stage, the researcher will design the product to be developed, which is a module that will be used as teaching material. The developed module is the P5 Experiential

Learning Based Module that contains material on plastic waste recycling with the theme of Sustainable Lifestyle for fifth grade elementary school.

c. Development Stage

At this stage, the researcher will implement the Development stage, which is the third stage in the application of the ADDIE model, and aims to produce a learning product in the form of Module P5.

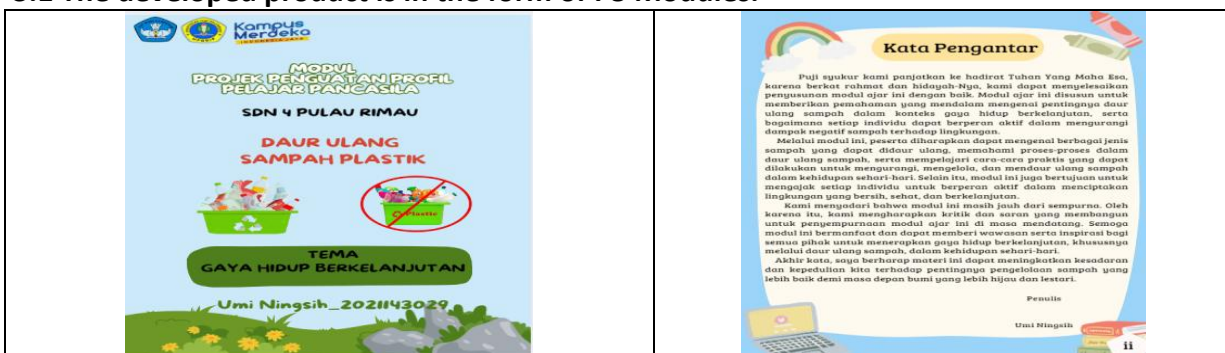
d. Implementation Stage

Implementation is the fourth stage in applying the ADDIE model used to develop a learning product. The researcher can conduct trials on the revised product that has been validated by subject matter experts, language experts, and media experts. Furthermore, after conducting trials with fifth-grade elementary school students, monitoring their activities is carried out to identify any obstacles in using the developed Module.

e. Evaluation

At this stage, evaluation is the final step in the implementation of the ADDIE model. At this stage, the researcher will assess the feasibility of the developed module, both in terms of validity and practicality, based on the prototype that has been tested. The validity and practicality of the prototype will be evaluated through a questionnaire analysis given to learners, to determine whether the product is suitable for use as teaching material in the learning process.

3.1 The developed product is in the form of P5 Modules.



This cover contains the title section which is the phase C project theme module. The background consists of a blend of blue and green colors. The foreword in the project module is an expression of the author's thoughts which includes, among other things, expressions of gratitude to Allah SWT, acknowledgments, information related to the P5 project module that has been created, and the author's hopes to be conveyed to the readers.



The flow of the project activities facilitates facilitators with all the details of the project learning activities carried out within a specific timeframe. The activities help facilitators prepare everything that is implemented in each project learning activity.



Activity 3 discusses the types of waste and waste classification. Activity 5 involves the actual recycling process of waste that will result in a handcraft.



The material consists of content that is aligned with the theme to be discussed. The product produced is in the form of a tissue holder.

Based on the results of the research conducted by the researchers, it was found that the developed product is classified as valid and practical. Validity is proven through the results of questionnaires from experts or validators. The language expert validator received a percentage of 85%, the content expert received a percentage of 82%, and the media expert received a percentage of 83%, which are all included in the 'very valid' category. Meanwhile, practicality is shown through the responses of classroom teachers in interviews stating that this P5 module can be used as an alternative for teachers in teaching activities, with a percentage of 83% in the One to One trial and 85% in the Small Group trial, both of which are categorized as 'very practical'.

The next final stage is evaluation, in this stage the researcher evaluates what has been done from the initial stage to the final stage so that the developed product can function well, be beneficial, and be suitable for use. The P5 module "Plastic Waste Recycling" with the theme of Sustainable Lifestyle can encourage students' creativity because in the learning process, learners become more active and creatively engaged in their learning, making them eager to respond to the guiding questions that have been prepared and to create crafts from plastic bottle waste.

#### 4. Conclusion

Based on the results of the research on the development of the Experiential Learning-based P5 Module "Recycling Plastic Waste" for the theme of Sustainable Lifestyle in elementary school students for the 2025/2026 odd semester that has been conducted, the researcher concludes that the P5 Module in this study using the ADDIE model is stated to be "Very Valid" and "Very Practical" for use in the learning process. Validity can be proven through the results of questionnaires from experts or validators. The language expert received a percentage of 85%, the content expert received a percentage of 82%, and the media expert received a percentage of 83%, indicating that

these percentages fall into the "very valid" category. Meanwhile, practicality is demonstrated through the responses of classroom teachers in interviews, in which the teachers stated that this P5 module can be used as an alternative for teachers in learning activities and distribution (Selegi, 2023). The questionnaire during the One to One trial was 83%, and during the Small Group trial, it was 85%, both of which fall into the "very practical" category.

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