

Pancasila Student Profile Strengthening Project: Boosting The Environmental Awareness in Primary School

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ABSTRACT

The Strengthening the Profile of Pancasila Students (Projek Penguatan Profil Pelajar Pancasila/P5) project is an effective synergy to raise awareness about waste management. This involves integrating learning materials on the negative impacts of waste into the school curriculum, as well as providing the means to implement waste reduction and management practices in the school environment and beyond. This study aims to determine the implementation of P5 in the utilisation of plastic waste as an effort to strengthen the environmental awareness character. Observation, documentation, and interviews were used to collect data. The data that had been collected was analysed using interactive techniques. The results showed that the implementation of P5 was carried out through 4 stages, namely 1) introduction, 2) contextualisation, 3) action, and 4) reflection and follow-up. The implementation of this project goes well in strengthening the character of students to be aware of the environment, as evidenced by the production of plastic processing products, such as tablecloths, flower vases, pencil cases, chairs and tables. Further studies should consider exploring strategies to enhance community engagement and active participation within the school. Future research could also investigate the role of partnerships with external stakeholders, such as NGOs, local businesses, or environmental experts, to provide additional resources and expertise.

Keywords: Pancasila student profile, environmental awareness, plastic waste utilisation, primary school, waste management

1. INTRODUCTION

Plastic waste is a concern today because it can cause serious problems for humans and environmental sustainability. Especially in the school environment, the waste problem is a serious issue that requires attention and better handling. The increasing amount of waste in schools not only creates a dirty and unhealthy environment, but also has a negative impact on environmental awareness among students (Morrison et al., 2023). Bahtiar et al. (2022) mentioned that measurements of waste composition in several schools showed that the most common type of waste generated

was plastic waste at 43.87%, paper waste at 37.88%, and organic waste at only 18.27%. This waste has the potential to break down into small particles called microplastics, with sizes of 0.3 to 5 millimetres (Hu et al., 2024; Jamieson et al., 2019; Öborn et al., 2024). Eriksen et al. (2014) revealed that it is precisely these small particles that are more dangerous, having the opportunity to enter the bodies of living things, including humans.

Humans can be exposed to microplastics through food, drink and water consumption. Even indoor air can be polluted with microplastics, with particles ranging

from 1.7 to 16.2 m³ in size (Prata, 2018; Vianello et al., 2019). Dris et al. (2016) explained that the presence of plastic components in the air can harm health and the environment, such as in polyvinyl chloride (PVC) plastics that contain halogens and can produce dioxins when burned. The impact of microplastic exposure on human health includes the risk of cancer, stroke, and respiratory problems (Dybas, 2020; Schraufnagel, 2020).

In fact, the younger generation is now underestimating this waste, especially the students (Arifah et al., 2024). This is unfortunate because awareness of the importance of waste management should be instilled early in the younger generation to become agents of change in maintaining environmental cleanliness and minimising the negative impacts caused by waste problems (Robles-Piñeros & Tateo, 2023; Shinta, 2019). Environmental education integrated into the school curriculum can be an effective means of raising such awareness, by teaching values about the importance of keeping the environment clean, how to properly manage waste, and the impact of excessive consumption behaviour on the environment (Arslan, 2012; Fortuna et al., 2023).

The Strengthening the Profile of Pancasila Students (*Projek Penguatan Profil Pelajar Pancasila/P5*) project is an effective synergy to raise awareness about waste management (Mauliyana et al., 2023). This involves integrating learning materials on the negative impacts of waste into the school curriculum, as well as providing the means to implement waste reduction and management practices in the school environment and beyond (Nisa et al., 2024). Several educational institutions, including MI Al Fattah Darussalam in Malang, have implemented the concept of P5 as part of a more independent educational approach. The implementation of P5 related to plastic waste utilisation was considered by the school based on initial observations that showed a lack of student awareness in waste management.

Through the Pancasila Student Profile Strengthening Project, the participation of MI Al Fattah Darussalam students in Malang in handling waste is expected to have enormous relevance in shaping environmental care behaviour from an early age (Ferdyan et al., 2021; Ismail, 2021; Naziyah et al., 2021). These students

play an important role in keeping the school neighbourhood clean and sustainable. In addition, engaging students in waste management practices provides an opportunity to develop awareness of the positive impact their actions can have.

Through the implementation of P5, schools are given the freedom to carry out projects flexibly, from the implementation time, activities, to the material contained in the P5. It is considered important to conduct research on how the implementation of P5 is carried out at MI Al Fattah Darussalam school in Malang related to the use of macroplastic waste. It is based on the reason that P5 has such an important role in shaping the character of students and can be used as a comparison of how the results obtained in the field with what has been designed by Ministry of Education and Culture regarding the implementation of P5.

2. RESEARCH METHOD

This research uses a descriptive qualitative method. It was chosen because this method will thoroughly describe field phenomena in a natural environment. This study is human instrument-based and conducted in a direct and confidential manner. It was conducted at Madrasah Ibtidaiyah (Islamic Elementary School) Al Fattah Darussalam Malang, Indonesia. Informants, events, and documents are the data sources of this study. Observation, documentation, and interviews were used to collect data. The vice principal for curriculum, P5 coordinator team, P5 facilitator team, and students from grades 3 and 4 were interviewed. Direct observations were made of the design, management, assessment and reporting of results, as well as the evaluation and follow-up of P5 implementation. Documentation was done by collecting photos and videos of P5 implementation, P5 modules, assessment rubrics, and journals of P5 activities. The research instruments used in this study include interview guidelines, observation sheets.

To ensure the validity of the data, the study employed methods such as extending participation, source triangulation, and technique triangulation. Additionally, the collected data were analyzed using the interactive method developed by Miles et al. (2014). This method was chosen because its three interrelated processes occur simultaneously and

continuously, resulting in comprehensive data. The data analysis process included selecting, focusing, and simplifying data based on the research focus (data condensation), organizing and presenting the data (data display), and finally drawing conclusions (verification).

3. FINDINGS & DISCUSSION

Based on research conducted at Madrasah Ibtidaiyah (Elementary Islamic School/MI) Al Fattah Darussalam Malang in February 2024 in grades III and IV totalling 17 students, the results show that the implementation of the Pancasila Student Profile Strengthening Project is in accordance with the module that the teacher has designed, namely the project is in phase B (grades III and IV) with a sustainable lifestyle in the topic of caring for the environment. The total time in this project is 126 lesson hours in 1 semester. The purpose of this project is to develop the competence and character of Pancasila students through sustainable lifestyle themed activities. In addition, this project is a means to invite students to process waste into products and preserve the environment. The target of this project is expected to achieve the creativity dimension in the element of flexibility of thinking in finding alternative solutions to problems.

The first phase of the project was for the school to form a team of project facilitators for each phase. Then conduct a school readiness analysis. MI Al Fattah Darussalam Malang is in the developing stage because some teachers have used the concept of project-based learning. Next, choose the dimension, theme and time of project implementation. MI Al Fattah Darussalam Malang chose the Creativity dimension. The theme taken is sustainable lifestyle, with a time allocation of 1 semester. The next stage is to develop a learning module. At this stage MI Al Fattah Darussalam Malang is at an advanced stage, namely the module is designed and developed by itself according to its own needs. The final stage is designing the reporting strategy. Project reporting contains assessment or assessment of students' abilities in project activities to strengthen the profile of Pancasila students.

The second stage is the contextual stage, which is communicating things that can help in completing the project. Diagnostic assessment, students do cognitive and non-cognitive diagnostic assessments. The two assessments are carried out by students by answering questions from the teacher both in writing and orally. Formative assessment 1, the target to be achieved is that students already understand about environmentally friendly activities and environmentally unfriendly activities. Formative assessment 2, the target to be achieved is to process waste into products.



Figure 1. Students sort plastic waste to use as craft products

The third is the real action stage, which is together realising the lessons they learned through real action or practice. The practice carried out is managing plastic waste into craft products. The steps of the activity start from students sorting waste with guidance from the teacher, and students carry out the processing of waste that has been determined. Then, students record processing progress every day in the processing sheet provided by the teacher and students document every process of processing waste into products in the form of photo documentation. The expected result in this waste processing is that students gain experience in creativity in processing waste.



Figure 2. Students process plastic waste into craft products

Fourth is the reflection and follow-up stage, which fulfills the process with reinforcement from the teacher, various good practices in processing waste into products, evaluation and reflection. Activities in this evaluation and reflection are students evaluating the work of other groups and each student reflecting on what they have gained in the project. The steps of the activity are that each group presents the results of their project in front of the class, and students evaluate the work of other groups through evaluation sheets. Then, students reflect on what they have gained during the project. The expected results of this evaluation and reflection are that students are able to communicate the results of work in the project and are able to reflect on themselves. Students conduct summative assessment by ticking the assessed aspects that have been learnt during the project process. Students also fill in the reflection sheet by writing in each box the things that have been obtained during project activities.



Figure 3. Students present their handcraft products made from plastic waste

Supporting factors in the implementation of the practice of processing waste into products at MI Al Fattah Darussalam Malang include, first, the existence of a segregated waste collection programme. This programme involves the entire school community in separating organic and inorganic waste from home, thus facilitating the waste processing process at school. Organic waste is then collected in the compost area located behind the school. Another supporting factor is the support from the school and school committee. The school provides facilities such as waste processing equipment and other supporting materials, while the school committee assists in the management and funding of this waste management activity. This support is crucial for the smooth running and sustainability of the waste management program.

Although this project went smoothly, there are inhibiting factors in this project, namely, lack of awareness and participation from some school residents. There are still students and teachers who do not fully understand the importance of waste management and its impact on the environment, so they lack discipline in separating waste and following the planned program. The next factor is the lack of support from external parties. Assistance from the local government or environmental organisations is still limited, either in the form of funds, training, or supporting facilities. This makes the waste-to-product processing program at school unable to run optimally. Another inhibiting factor is the lack of technical knowledge and skills. Despite the training, there are still many school members who do not have adequate technical skills in processing waste into products. This limited knowledge makes the waste processing process less efficient and the results are less than optimal.

Through involvement in the P5 project, which focuses on waste management, it can strengthen students' character education related to attention to the surrounding environment (Rahmayanti et al., 2020; Surjanti, 2012). Environmental awareness is an important aspect in shaping behaviour through habits and acculturation. In addition to character education, the program is expected to increase students' awareness of the importance of protecting the natural environment by increasing their knowledge, skills, values, and awareness. It also increases their ability to contribute to sustainable development and take action on behalf of nature and environmental conservation (Puspitasari et al., 2024; Salimi et al., 2021). Furthermore, Ngalu (2019) explained that through waste processing activities, students are able to increase their knowledge, skills and creativity about processing waste into valuable objects. Although the products produced were simple, the students gained new knowledge and skills from this P5 activity. They realised that used objects do not always become useless and then thrown away. There is always an opportunity to creatively reprocess them into objects of value.

As the main pillar of the school, Muliana et al. (2018) revealed that teachers should have a great responsibility to support students' character building

program related to waste management by integrating relevant indicators in the curriculum. With effective coordination between the government, teachers, families, and communities, it is expected to make a joint contribution in shaping moral behaviour, while providing learners with an understanding of the importance of environmental awareness and educating them in maintaining the daily environment.

4. CONCLUSION & RECOMMENDATION

Based on the research that has been done, it can be concluded that the analysis of the implementation of the project to strengthen the profile of Pancasila students on the theme of sustainable lifestyles of third grade students of MI Al Fattah Darussalam Malang in the dimension of creativity in the element of flexibility of thinking in finding alternative solutions to problems is through 4 stages: 1) introduction, 2) contextualisation, 3) action, and 4) reflection and follow-up.

Supporting factors for the implementation of the Pancasila Student Profile recruitment project include involving all school community members, the school provides facilities, and funds. There are also inhibiting factors for the implementation of the Pancasila Student Profile recruitment project including the lack of active participation of school residents, lack of support from outside parties, and limited knowledge of waste management. It can be concluded that the analysis of the implementation of the project to strengthen the profile of Pancasila students, themed around sustainable lifestyles for grade III students at MI Al Fattah Darussalam Malang, shows that the project was carried out successfully. It meets its objectives in fostering students' environmental awareness. This is evidenced by the production of plastic recycling products, such as tablecloths, flower vases, pencil cases, chairs, and tables.

While the research demonstrates the successful implementation of the project to strengthen the Pancasila Student Profile on the theme of sustainable lifestyles for grade III students, several limitations were identified. One limitation is the lack of active participation from all school members, which could hinder the overall effectiveness of the project.

Additionally, the limited support from external parties, such as environmental organizations or local government, may restrict opportunities to enhance the program's scope and impact. Another notable limitation is the students' and educators' limited knowledge of waste management, which could affect the depth of understanding and application of sustainable practices.

To address these limitations, further studies should consider exploring strategies to enhance community engagement and active participation within the school. Future research could also investigate the role of partnerships with external stakeholders, such as NGOs, local businesses, or environmental experts, to provide additional resources and expertise. Moreover, incorporating comprehensive training sessions on waste management and sustainability into the project could strengthen students' knowledge and skills. Longitudinal studies assessing the long-term impact of such projects on students' environmental awareness and behavior are also recommended to evaluate the sustainability of the outcomes. Expanding the study to include a comparative analysis with other schools could offer valuable insights into best practices and scalable solutions for similar educational initiatives.

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REFERENCES

- Arifah, Z., Nurdin, I. P., Nisak, C. L. C., Fatia, D., & Nusuary, F. M. (2024). Pencemaran Mikroplastik di Sungai: Suatu Tinjauan Sosiologis terhadap Perilaku Menyimpang Pengelolaan Sampah di Masyarakat. *Dynamics of Rural Society Journal*, 2(1, January), 1, January. <https://doi.org/10.37905/drsj.v2i1.46>
- Arslan, S. (2012). The Influence of Environment Education on Critical Thinking and Environmental Attitude. *Procedia - Social and Behavioral Sciences*, 55, 902–909. <https://doi.org/10.1016/j.sbspro.2012.09.579>
- Bahtiar, B., Yusuf, Y., Tamalene, M. N., & Sabar, M. (2022). Investigasi Pengetahuan Dasar tentang Bahaya Sampah Plastik pada Siswa Sekolah Dasar di Pulau Maitara, Maluku Utara. *Jurnal Ilmiah Wahana Pendidikan*, 8(20), 20. <https://doi.org/10.5281/zenodo.7232670>
- Dris, R., Gasperi, J., Saad, M., Mirande, C., & Tassin, B. (2016). Synthetic Fibers in Atmospheric Fallout: A Source of Microplastics in the Environment? *Marine Pollution Bulletin*, 104(1–2), 290–293. <https://doi.org/10.1016/j.marpolbul.2016.01.006>
- Dybas, C. L. (2020). Silent Scourge: Microplastics in Water, Food, and Air: Scientists Focus on the Human Health Effects of Ubiquitous Plastics. *BioScience*, 70(12), 1048–1055. <https://doi.org/10.1093/biosci/biaa119>
- Eriksen, M., Lebreton, L. C. M., Carson, H. S., Thiel, M., Moore, C. J., Borerro, J. C., Galgani, F., Ryan, P. G., & Reisser, J. (2014). Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea. *PLOS ONE*, 9(12), e111913. <https://doi.org/10.1371/journal.pone.0111913>
- Ferdyan, R., Vauzia, V., Zulyusri, Z., Santosa, T. A., & Razak, A. (2021). Model Pendidikan Lingkungan Hidup: Kegiatan Pembelajaran pada Siswa Sebagai Bagian dari Lingkungan di Era New Normal. *Natural Science*, 7(1), 1. <https://doi.org/10.15548/nsc.v7i1.2453>
- Fortuna, D., Muttaqin, M. F., & Amrina, P. (2023). Integrasi Karakter Peduli Lingkungan Dalam Program Sekolah Adiwiyata di SDN Cipondoh 5. *Jurnal Elementaria Edukasia*, 6(4), 4. <https://doi.org/10.31949/jee.v6i4.7557>
- Hu, H., Qiang, L., Xu, J., Li, G., Cheng, J., Zhong, X., & Zhang, R. (2024). Enhanced Microplastic Retrieval Efficiency from Cultivated Soil Samples Through Optimized Pre-Treatment in Density-Based Extraction. *Soil and Tillage Research*, 242, 106134. <https://doi.org/10.1016/j.still.2024.106134>
- Ismail, M. J. (2021). Pendidikan Karakter Peduli Lingkungan dan Menjaga Kebersihan di Sekolah. *Guru Tua : Jurnal Pendidikan Dan Pembelajaran*, 4(1), 1. <https://doi.org/10.31970/gurutua.v4i1.67>
- Jamieson, A. J., Brooks, L. S. R., Reid, W. D. K., Piertney, S. B., Narayanaswamy, B. E., & Linley, T. D. (2019). Microplastics and Synthetic Particles Ingested by Deep-Sea Amphipods in Six of the Deepest Marine Ecosystems on Earth. *Royal Society Open Science*, 6(2), 180667. <https://doi.org/10.1098/rsos.180667>
- Mauliyana, T., Fatima, Y. D., Dinina, S., Lestari, W. P. I., Astuti, T., Sari, S. P. M., Ulfa, E., As, D. O., Kurniasari, F., Sanda, G. D., & Hudaidah, H. (2023). Implementasi Proyek Pengelolaan Sampah Untuk Menumbuhkan Nilai Profil Pelajar Pancasila Pada Peserta Didik di SD Negeri 149 Palembang. *Martabe : Jurnal Pengabdian Kepada Masyarakat*, 6(5), 5. <https://doi.org/10.31604/jpm.v6i5.1636-1648>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). SAGE Publications.
- Morrison, J. A., Malone, D., & Sorensen Petersen, S. (2023). Trash is a Problem! Building Students' Connection to Their School Community. *Journal of Special Education Technology*, 38(4), 555–562. <https://doi.org/10.1177/01626434231165456>
- Muliana, A., Maryani, E., & Somantri, L. (2018). Ecoliteracy Level of Student Teachers (Study toward Students of Universitas Syiah Kuala Banda Aceh). *IOP Conference Series: Earth and Environmental Science*, 145(1), 012061. <https://doi.org/10.1088/1755-1315/145/1/012061>
- Naziyah, S., Akhwani, A., Nafiah, N., & Hartatik, S. (2021). Implementasi Pendidikan Karakter Peduli Lingkungan di Sekolah Dasar. *Jurnal Basicedu*, 5(5), 5. <https://doi.org/10.31004/basicedu.v5i5.1344>

- Ngalu, R. (2019). Peningkatan Kesadaran dan Kreativitas Siswa Sekolah Dasar tentang Sampah Melalui Pelatihan Pengolahan Sampah menjadi Benda Bernilai di Desa Golo Ropong. *Randang Tana - Jurnal Pengabdian Masyarakat*, 2(2), 137–145. <https://doi.org/10.36928/jrt.v2i2.391>
- Nisa, N., Dewi, D. A., & Furnamasari, Y. F. (2024). Implementasi Pendidikan Karakter Peduli Lingkungan pada Siswa di SD Negeri 1 Suranenggala. *Indo-MathEdu Intellectuals Journal*, 5(2), 2. <https://doi.org/10.54373/imeij.v5i2.949>
- Öborn, L., Österlund, H., & Viklander, M. (2024). Microplastics in Gully Pot Sediment in Urban Areas: Presence, Quantities and Characteristics. *Environmental Pollution*, 124155. <https://doi.org/10.1016/j.envpol.2024.124155>
- Prata, J. C. (2018). Airborne Microplastics: Consequences to Human Health? *Environmental Pollution (Barking, Essex: 1987)*, 234, 115–126. <https://doi.org/10.1016/j.envpol.2017.11.043>
- Puspitasari, D., Muhlis, M., Inayah, F., Ristiana, E., Saleh, A. R., & S, M. I. (2024). Project Based Learning Pengolahan Sampah Pada Siswa SD Muhammadiyah 3 Makassar. *Jurnal Abdimas Indonesia*, 4(1), 1. <https://doi.org/10.53769/jai.v4i1.658>
- Rahmayanti, H., Ichsan, I. Z., Oktaviani, V., Syani, Y., Hadi, W., & Marhento, G. (2020). Environmental Attitude for Smart City Technology: Need Assessment to Develop Smart Trash in Environmental Education. *International Journal of Advanced Science and Technology*, 29(3), 3.
- Robles-Piñeros, J., & Tateo, L. (2023). Isn't all about trash... Children's conceptions about ecology and their implications for biology education in Colombia. *Journal of Biological Education*, 57(3), 692–705. <https://doi.org/10.1080/00219266.2021.1941189>
- Salimi, M., Dardiri, A., & Sujarwo, S. (2021). The profile of students' eco-literacy at nature primary school. *Cypriot Journal of Educational Sciences*, 16, 1450–1470. <https://doi.org/10.18844/cjes.v16i4.5999>
- Schraufnagel, D. E. (2020). Global Alliance Against Chronic Respiratory Diseases Symposium on Air Pollution: Overview and Highlights. *Chinese Medical Journal*, 133(13), 1546–1551. <https://doi.org/10.1097/CM9.0000000000000877>
- Shinta, A. (2019). *Penguatan Pendidikan Pro-Lingkungan Hidup di Sekolah-Sekolah Untuk Meningkatkan Kepedulian Generasi Muda Pada Lingkungan Hidup*. BEST Media.
- Surjanti, J. (2012). *Pemetaan Kesiapan Pengajaran Bernuansa Pendidikan Karakter Berwawasan Lingkungan Siswa SMA IPS Di Wilayah Gerbang Kertasusila*. 436–449. <https://repository.ut.ac.id/5019/>
- Vianello, A., Jensen, R. L., Liu, L., & Vollertsen, J. (2019). Simulating Human Exposure to Indoor Airborne Microplastics Using a Breathing Thermal Manikin. *Scientific Reports*, 9(1), 8670. <https://doi.org/10.1038/s41598-019-45054-w>