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# Development of a Project-Based Module to Strengthen the Pancasila Student Profile through Ocean Literacy on the Theme of Sustainable Lifestyle for Phase B in Primary School

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**ABSTRACT**

This study was motivated by the low level of understanding and awareness among elementary school students regarding the importance of marine conservation, particularly in coastal areas such as North Rupat, Bengkalis, Riau. The lack of contextual learning and limited integration of ocean literacy in the classroom were identified as key contributing factors. The purpose of this research was to develop and assess the feasibility of a Student Profile Strengthening Project (P5) Module Based on Ocean Literacy, focused on the theme of Sustainable Lifestyles for Phase B elementary students. The research employed a Research and Development (RnD) method using the 4D development model (Define, Design, Develop, Disseminate). The procedures included curriculum and needs analysis, module design, expert validation (media, content, and language), and testing by teachers and students. Validation results indicated that the module was highly valid, with final scores of 98% (media expert), 95% (content expert), and 95% (language expert). Feedback from dissemination trials showed excellent feasibility, with teacher ratings of 100% for usefulness and 96.25% for appeal. Student assessments indicated strong marine literacy outcomes: 87% for knowledge, 88.5% for attitude, and 88.2% for behavior. These findings demonstrate that the developed module meets criteria for validity, feasibility, and effectiveness, and serves as an innovative learning resource to instill environmental awareness and reinforce the values of the Pancasila Student Profile through ocean literacy-based project learning.

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## INTRODUCTION

The sustainability of marine ecosystems remains a pressing issue in the context of climate change and global ecological degradation (Hapidin et al., 2022). As the largest archipelagic nation, Indonesia possesses vast marine and fisheries resources (Muattininggar et al., 2023). One of its coastal regions, North Rupat Island in Bengkalis Regency, Riau Province, is renowned for its rich marine potential and natural beauty (Gje et al., 2019). However, over time, these resources have been increasingly damaged due to various environmental pressures (Utami et al., 2021).

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The degradation of marine environments is escalating annually, primarily driven by anthropogenic activities. A significant contributing factor is the lack of public knowledge regarding the ocean and the adverse impacts of irresponsible behavior. This issue demands the collective responsibility of all societal sectors, including teachers and students (Amani et al., 2021). Both educators and learners must understand the significance of the ocean and how to manage its resources sustainably, as the connection between humans and the sea is inseparable (Amalina et al., 2023). However, the general public, particularly students, often lack knowledge and emotional connection to the ocean, as marine education is rarely incorporated into learning experiences (Irawan, 2018) (Pazoto et al., 2022).

Ocean literacy refers to a comprehensive understanding of the ocean's role in human life and vice versa, including the dissemination of knowledge and responsible behavior towards marine ecosystems (Markos et al., 2017) (Hapidin et al., 2022). It encompasses three key aspects: knowledge of ocean content, positive attitudes toward marine environments, and responsible behavior in line with ocean values (N. E. K. Hindrasti, 2018). Formal education, particularly at the primary level, plays a strategic role in nurturing these competencies from an early age (Kelly et al., 2022).

To cultivate this awareness, learning should begin at the elementary school level by instilling love and care for the sea. One effective approach is through the development of a Pancasila Student Profile Strengthening Project (P5) module that integrates ocean literacy. This project-based learning aligns with the Merdeka Curriculum, which mandates schools to implement interdisciplinary learning to address real-world problems and encourage students to contribute to their surroundings (Wulansari et al., 2023) (Pratiwi et al., 2023).

The P5 project module offers several thematic options, such as local wisdom, unity in diversity, building physical and mental resilience, entrepreneurship, and sustainable lifestyle. Among these, the sustainable lifestyle theme is particularly relevant for promoting balanced living and preserving ecological integrity (Putri Andini Nasution et al., 2024) (Apriani & Sari, 2020) (Rona & Nurlizawati, 2024). Previous research also demonstrated that the integration of this theme into P5 projects can foster environmental awareness and sustainable character among students (Maulida, 2023).

Integrating ocean literacy into the sustainable lifestyle theme within P5 learning serves as a strategic step to create students who possess the knowledge, attitudes, and behaviors necessary to care for the marine environment (McCauley et al., 2019). Therefore, this study aims to develop and evaluate the feasibility of a P5 Project Module Based on Ocean Literacy, specifically for the sustainable lifestyle theme in Phase B elementary education.

## LITERATURE REVIEW/ THEORETICAL FRAMEWORK

### 2.1 Ocean Literacy

#### Definition of Ocean Literacy

Ocean literacy is defined as a comprehensive understanding of the reciprocal relationship between the ocean and humans, emphasizing both the ocean's influence on human life and human impact on the marine environment (Asikin et al., 2023)(Arwan & Ali, 2023). An ocean-literate individual is characterized by the ability to understand core ocean principles, communicate meaningfully about the ocean, and make responsible, informed decisions regarding marine resources (Sari & Wilujeng, 2021). It is not only an awareness movement, but also a call for accountability and empowerment in the stewardship of marine ecosystems (Fielding et al., 2019). Thus, ocean literacy plays a critical role in environmental sustainability and is increasingly recognized as essential in education for sustainable development.

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**Dimensions of Ocean Literacy**
Ocean literacy consists of three primary dimensions: (1) Knowledge of ocean systems and resources, (2) Attitudes toward preserving marine environments, and (3) Behaviors that reflect care and responsibility toward the ocean(Hapidin et al., 2022) (Eka & Hindrasti, 2021). These dimensions aim to develop responsible and environmentally aware citizens who critically engage with ocean-related issues.

**Principles of Ocean Literacy**
There are seven key principles of ocean literacy widely adopted in marine education:

1. Earth has one big ocean with many features.
2. The ocean and life in the ocean shape Earth's features.
3. The ocean influences weather and climate.
4. The ocean makes Earth habitable.
5. The ocean supports a great diversity of life and ecosystems.
6. The ocean and humans are inextricably interconnected.
7. Most of the ocean is unexplored (Hapidin et al., 2022) (N. eka kusuma Hindrasti, 2018). These principles are foundational in helping learners understand the global importance of the ocean and the urgent need to conserve it.

**Pancasila Student Profile Project Module**
**Definition of the P5 Module**
The Pancasila Student Profile Project Module is a structured learning resource that contains objectives, activities, learning media, and assessments designed to implement character-building projects aligned with Indonesia's national values. It supports students in internalizing Pancasila values through interdisciplinary and contextual learning experiences (Ristek, 2021) (Fadhilah et al., 2021).

**Objectives of the P5 Module**
The P5 module aims to enhance learning effectiveness, accommodate individual learning speeds, foster independent learning, provide continuous self-assessment opportunities, and position students at the center of learning. It is also intended to help students apply Pancasila values in daily life in a structured and measurable manner (Rizky Satria et al., 2022).

**Principles of the P5 Module**
The implementation of the P5 module is guided by four main principles:

- **Holistic**: integrated and interdisciplinary approaches.
- **Contextual**: learning grounded in real-life situations and local issues.
- **Student-centered**: learners actively construct knowledge with teacher facilitation.
- **Explorative**: open-ended projects allowing deep exploration of concepts and ideas (Purnawanto, 2022) (Anwar, 2023).

**Dimensions of the Pancasila Student Profile**
The module supports six core dimensions:

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1. Faith and piety to God Almighty and noble character
2. Global diversity
3. Mutual cooperation (gotong royong)
4. Independence
5. Critical thinking
6. Creativity (Wulandari et al., 2023) (Rizal et al., 2022)

These dimensions aim to shape learners into globally competent individuals grounded in Indonesian values.

**Sustainable Lifestyle Theme in the P5 Module**

Among the thematic options in P5, the sustainable lifestyle theme is directly aligned with ocean literacy. It emphasizes awareness of human impact on the environment, encourages responsible use of natural resources, and promotes environmental stewardship. Activities in this theme include recycling, sustainable consumption, and waste management, which help instill a sense of responsibility and proactive behavior toward sustainability from an early age (Maulida, 2023) (Syafi'i, 2021).

**Steps for Developing the P5 Module**

Developing a P5 module involves the following steps: (1) understanding the concept, (2) preparing the school ecosystem, (3) designing the project, (4) implementing the project, and (5) documenting and evaluating outcomes. Essential components include project descriptions, target competencies, activity flow, assessments, guiding questions, and reflection tasks (Rizal et al., 2022) (Rachmawati et al., 2022).

## METHOD

This study employed a Research and Development (R&D) approach aimed at developing and evaluating the feasibility of a Pancasila Student Profile (P5) Project Module based on Ocean Literacy under the theme of Sustainable Lifestyle for Phase B elementary students. The development model used was the 4D model (Define, Design, Develop, Disseminate) as proposed by Thiagarajan, Semmel, and Semmel (Silalahi, 2018) (Maydiantoro, 2019).

**Development Procedures**

- **Define Phase**

  This phase involved curriculum analysis, student needs analysis, and teacher readiness analysis related to the integration of ocean literacy in schools. The goal was to determine the specifications and scope of the module to be developed.

- **Design Phase**

  This stage focused on structuring the module content, layout design, and preparing the initial draft of the P5 project module. The module draft was then reviewed by academic supervisors before undergoing expert validation to ensure its quality and relevance.

- **Develop Phase**

  In this phase, the module was tested through two levels of validation:

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- **Expert Validation**: Conducted by media, content, and language experts to evaluate the structure, accuracy, clarity, and appropriateness of the module content.
- **Practitioner Validation**: Involved elementary school teachers (practitioners) to assess the module from the user perspective. Revisions were made based on feedback from both validation phases.

- **Disseminate Phase**

  The finalized module was introduced through a limited dissemination activity involving selected Phase B teachers. This was conducted to present the module, explain its purpose, and collect initial user responses.

**Research Setting and Time**

The research was conducted at the Graduate Program of Universitas Riau for the development phase and involved elementary school teachers in the dissemination stage. The study took place during the 2024/2025 academic year.

**Types and Sources of Data**

This study used both **quantitative** and **qualitative** data. Quantitative data were collected through scores from validation instruments, while qualitative data were obtained from expert and practitioner comments.

- **Data sources** included: media experts, content experts, language experts, classroom teachers, and elementary school students (Phase B).

**Data Collection Techniques and Instruments**

Instruments included validation checklists and student response sheets:

- **Media Expert Validation**: Assessed color schemes, balance, integration, and format.
- **Content Expert Validation**: Assessed relevance to the Pancasila Student Profile and ocean literacy, accuracy, and up-to-dateness.
- **Language Expert Validation**: Assessed language clarity, grammatical accuracy, and communicativeness.
- **Practitioner Validation**: Assessed ease of use, usefulness, and attractiveness.
- **Student Response Sheets**: Measured three aspects ocean knowledge, environmental attitudes, and ocean-related behaviors.

A 5-point Likert scale was used for expert/practitioner validations, and a 4-point scale for student responses.

**Data Analysis Techniques**

- **Quantitative Analysis**

  Data were analyzed using percentage formulas:

$$\boldsymbol{Presentase} = \frac{skor\ yang\ diperoleh}{skor\ maksimum} \text{ x } 100\% \text{ (Zulhaida, 2023)}$$

**Table 1.** Assessment categories

| Average Percentage Interval (%) | Category |
|---|---|

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| | |
|---|---|
| 84-100 | Very Valid / Very Feasible |
| 68-83 | Valid / Feasible |
| 52-67 | Fairly Valid / Fairly Feasible |
| 36-51 | Not Valid / Not Feasible |
| 20-35 | Very Poor Validity / Feasibility |

(Putra, 2018)

- **Qualitative Analysis**
  Expert and practitioner feedback were descriptively analyzed to support product revision and improvement. This technique involves opinions or ideas that cannot be measured numerically. The qualitative data is obtained from the comments and suggestions provided by validators (subject matter experts, media experts, and language experts) as well as practitioners (teachers) through validation sheets. The data is then analyzed and compared to improve and determine the feasibility of the developed product.

- **Effectiveness Analysis (Quartile Method)**
  Student response data were analyzed using the quartile method to categorize effectiveness levels of the module. Effectiveness criteria were based on quartile scores and grouped as: (Rika Widianita, 2023)

**Table 2.** Effectiveness Criteria

| Criteria | Category |
|---|---|
| 79,69 ≤ Scor ≤ 80 | Very Good |
| 76,25 ≤ Scor ≤ 79,69 | Good |
| 67,81 ≤ Scor ≤ 76,25 | Fair |
| 0 ≤ Scor ≤ 67,81 | Poor |

The percentage of student assessment was also calculated using the same formula and interpreted with the following criteria: (Sugiyono, 2014)

**Table 3.** Percentage of Student Assessment

| Average Percentage Interval (%) | Category |
|---|---|
| 84-100 | Very Good |
| 68-83 | Good |
| 52-67 | Fair |
| 36-51 | Poor |
| 20-35 | Very Poor |

## RESULTS

This chapter presents the results of the development research on a project-based learning module to strengthen the Pancasila Student Profile through ocean literacy on the theme of Sustainable Lifestyle for Phase B in Primary School.

### Define Stage

The define stage aimed to determine the type of product to be developed, which in this study is a project-based learning module to strengthen the Pancasila Student Profile through ocean literacy

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on the theme of *Sustainable Lifestyle* for Phase B students. This stage consisted of three key analyses: curriculum, student, and teacher analysis.

Curriculum analysis revealed that SDN 03 Rupat Utara has implemented the Merdeka Curriculum and actively engages in Project-Based Learning (P5). One of the main themes chosen was *sustainable lifestyle*, which has already encouraged environmental awareness through activities such as plastic waste reduction and recycling. However, ocean literacy had not yet been integrated into the school's P5 program, presenting a valuable opportunity to contextualize sustainability education through marine ecosystem awareness, in line with local coastal characteristics.

Student analysis focused on understanding the knowledge and readiness of Phase B (Grade IV) students regarding ocean literacy. While students demonstrated early awareness of environmental cleanliness and showed enthusiasm for project-based and hands-on learning, their understanding of ocean ecosystems was still limited to basic concepts. They were largely unaware of the interconnectedness between ocean pollution and human life or the complexity of marine ecosystems. These findings underscore the need for an interactive and contextual module that can deepen students' cognitive, affective, and behavioral competencies related to the ocean.

Teacher analysis showed that most teachers possessed a solid understanding of the Pancasila Student Profile and the sustainable lifestyle theme. However, ocean literacy had not yet been a focus in their instructional practice. Teachers expressed the need for practical, easy-to-implement teaching materials and requested guidance to integrate ocean literacy into P5 projects. They also highlighted the importance of structured project modules and brief training sessions to build their capacity in managing ocean literacy-based sustainability projects effectively.

Overall, the define stage clearly identified the necessity and relevance of developing a project-based module that integrates ocean literacy into the sustainable lifestyle theme of P5. This module is expected to support both teachers and students in enhancing environmental awareness, particularly regarding the marine ecosystem, in a contextual and engaging manner.

**Design Stage**

In the design stage, the researcher developed the structure and content of a project-based learning module aimed at strengthening the Pancasila Student Profile through ocean literacy under the theme *Sustainable Lifestyle* for Phase B primary school students. The design process began with material selection that ensured alignment with the Merdeka Curriculum, the readiness of the school environment, and the feasibility of implementation. The chosen theme was *Sustainable Lifestyle*, with the project topic titled *Harmony Between Ocean and Life*. The project was planned to be conducted over 126 instructional hours in one semester, targeting four key dimensions of the Pancasila Student Profile: faith and piety, global diversity, collaboration, and creativity.

Each dimension was elaborated into elements and sub-elements to guide student development. These included environmental ethics, appreciation of marine biodiversity and cultural diversity, collaboration in marine preservation activities, and the generation of creative solutions to reduce ocean pollution. A rubric was designed to assess student competency progression across four levels: not yet developed, emerging, as expected, and highly developed.

The module structure followed the standard P5 project stages: introduction, contextualization, action, and follow-up/reflection, which allowed students to explore real-world problems and take meaningful action. The visual design of the module was also carefully planned, including elements such as cover design, preface, table of contents, introductory sections, thematic relevance, and local context from Rupat Utara. The layout emphasized a balance between informative content and engaging visual presentation to support effective learning.

Additional components included a detailed explanation of the project dimensions and sub-elements, learning objectives, competency targets, activity plans, timelines, assessment methods,

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and appendices with student worksheets and teacher guidance. The module also incorporated a clear author profile and a bibliography to ensure transparency and academic rigor. Overall, the design phase laid a strong foundation for the development of a comprehensive, contextual, and practical learning module that supports environmental education and character development through ocean literacy.

Following the initial design phase involving sketches, the researcher enhanced the module with color, images, and a structured layout to complete the design of the Project-Based Learning Module to Strengthen the Pancasila Student Profile through Ocean Literacy on the theme of Sustainable Lifestyle for Phase B in primary school. The module features a double-sided cover, with one side displaying the module title and the phrase *"Together, Let's Protect Our Ocean"*, and the other side showing the project topic *"Harmony Between Ocean and Life"* along with the authors' names. The module begins with a preface outlining the background, objectives, and the importance of ocean literacy. The table of contents presents a structured overview of the module, including sections such as unique facts about Rupat Utara Island, introduction, general information, theme and topic relevance, and author profiles.

Each component is designed to support contextual and meaningful learning. Key sections include a project overview, dimensions-elements-sub-elements of the Pancasila Student Profile, end-of-phase achievement targets, and a progression map of sub-elements across learning phases. The module also details project stages introduction, contextualization, action, and reflection with specific student activities aligned with each stage, accompanied by a structured project schedule consisting of 15 main activities.

Assessment components are developed through tools such as teacher observation sheets, project reports, and student reflections. The module includes appendices with student worksheets and reflection forms, a reference list used in compiling the module content, and an author profile section with author photos and bios. The back cover contains a brief synopsis summarizing the purpose and content of the module. The overall design and content aim to foster an interactive, contextual, and character-rich learning experience aligned with the values of the Pancasila Student Profile and ocean literacy principles.

**Disseminate Stage**

In the disseminate stage, the researcher carried out the distribution of the Project-Based Module to Strengthen the Pancasila Student Profile through Ocean Literacy for Phase B under the theme *Sustainable Lifestyle* at the primary school level. Dissemination activities were conducted through an online socialization session via Zoom, involving teachers and students from SDN 03 Rupat Utara, along with the publication of the module under an ISBN. During the session, the researcher introduced the module's purpose, structure, and educational benefits, particularly in reinforcing ocean literacy and the Pancasila Student Profile through project-based learning.

The event included module content presentation, explanations of its structure and components, as well as the learning activities designed to support character development. A discussion and Q&A session followed, allowing teachers to give feedback and deepen their understanding. Each teacher received a feedback form assessing the clarity, relevance, and usability of the module, while students were given evaluation sheets to assess the effectiveness of the module from the learner's perspective.

The goal of this activity was to ensure that both educators and students could understand and apply the module effectively in classroom practice to foster sustainable awareness and behavior. Feedback was quantitatively analyzed using quartile scoring, where results were categorized as follows: Quartile 1 (Q1) = < 67.81, Quartile 2 (Q2) = 67.81–76.25, Quartile 3 (Q3)

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= 76.25–79.69, and Quartile 4 (Q4) = > 79.69, to identify levels of comprehension and satisfaction.

**Analysis of Dissemination Feedback**

The dissemination stage revealed varied levels of teacher understanding regarding the module through feedback scores, which were categorized using quartile analysis. In Quartile 4 (Q4), five teachers (Teachers 4, 8, 9, 11, and 19) achieved the highest scores (≥80), indicating excellent comprehension and readiness to apply the module effectively. These teachers are potential candidates to serve as mentors or facilitators in future training and peer-sharing sessions. In Quartile 3 (Q3), three teachers (Teachers 7, 15, and 18) were categorized as "Good" with scores ranging from 77.5 to 78.75. They demonstrated solid understanding but would benefit from targeted practice-based reinforcement to strengthen certain areas.

Quartile 2 (Q2) included six teachers (Teachers 1, 2, 3, 5, 12, and 13) who showed moderate comprehension (scores between 70 and 76.25) but faced challenges in applying certain module components. These teachers would benefit from mentorship, group discussions, and personalized coaching. Meanwhile, Quartile 1 (Q1) included six teachers (Teachers 6, 10, 14, 16, 17, and 20) with the lowest scores (≤68.75), reflecting significant difficulty in grasping the dissemination content. These teachers require intensive support, interactive methods, and repeated practice such as simulations or hands-on sessions, ideally guided by peers from higher quartiles.

**Marine Knowledge Assessment Summary**

The results of the marine knowledge assessment indicate that the majority of students demonstrated a strong understanding of fundamental ocean concepts, with an average score of 87%. Out of all participants, 14 students were categorized as "very good" and 13 as "good", suggesting that students have a solid grasp of the ocean as a global, interconnected system that influences climate, supports biodiversity, and sustains human life. Specifically, students showed excellent comprehension on indicators related to the unity of Earth's oceans, the ocean's role in shaping Earth's characteristics, and its function in supporting biodiversity and human survival. They were able to link features such as coral reefs and ocean trenches with the broader ecological identity of the planet and recognized the ocean's contribution to life through food, air, and climate regulation.

However, some variation was observed in understanding the ocean's role in climate and weather regulation, with a few students needing further clarification on the ocean-atmosphere relationship. The lowest levels of understanding were recorded in the seventh indicator, which assessed awareness of the ocean's unexplored areas. While some students showed curiosity, many were unaware that much of the ocean remains undiscovered. This suggests the need for further enrichment and exploratory learning approaches to foster students' curiosity and deepen their comprehension of marine science topics. Overall, the data reflects a promising level of ocean literacy among students, with certain areas that would benefit from more contextual and inquiry-based teaching methods.

**Student Attitudes and Behaviors Toward the Ocean**

The assessment of students' attitudes toward the ocean revealed a generally high level of environmental awareness and responsibility, with an average score of 88.5%, indicating that most students had internalized positive values toward marine conservation. Utilizing 10 statements based on ecopedagogical principles—such as eco-crisis awareness, ecological balance, sustainable consumption, and anti-anthropocentrism—the findings show that students not only understood the threats facing marine ecosystems but also embraced ethical perspectives that

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placed human responsibility within the broader context of nature. Most students recognized the ocean's finite resources (limit to growth), opposed human-centered worldviews (anti-anthropocentrism), and acknowledged the mutual dependence between humans and healthy marine ecosystems (anti-exemptionalism). Additionally, students showed willingness to persuade peers to protect the ocean and had begun to adopt sustainable behaviors such as using reusable bottles and conserving water.

In terms of actual behavior, students demonstrated a high degree of engagement, with an average score of 88.2% across three key indicators: persuasion, sustainable consumption, and ecological management. Many students were actively involved in environmental actions such as organizing beach clean-ups, making ecobricks from plastic waste, and planting trees, signaling the successful translation of ecological values into tangible practices. The distribution of behavior scores showed that 14 students achieved a perfect score (100%), while the majority fell into the "very good" and "good" categories. Only a few students were categorized as “fair,” indicating areas for further reinforcement. These results confirm that the integration of ocean literacy into project-based learning has effectively shaped both the attitudes and behaviors of students toward marine conservation.

## DISCUSSION

This study demonstrates that the development of a Project-Based Module to Strengthen the Pancasila Student Profile through Ocean Literacy on the theme of Sustainable Lifestyle for Phase B in Primary School is a strategic step toward enhancing students’ awareness and sustainable behavior, particularly in coastal areas. The research falls under developmental research and adopts the Four-D model (Define, Design, Develop, Disseminate), which systematically designs and evaluates the module's feasibility.

In the define stage, although SDN 03 Rupat Utara had already implemented the Independent Curriculum and the sustainable lifestyle theme within the Pancasila Student Profile Projects (P5), ocean literacy had not been optimally integrated. Yet, ocean literacy is highly relevant for students in coastal regions and aligns with the values of the Pancasila Student Profile, particularly the dimensions of environmental morality and collaboration. Students’ limited understanding of marine ecological issues—such as the impact of ocean pollution on human life—indicates the need for more contextual and comprehensive learning approaches, as emphasized by (Asikin et al., 2023).

The design stage resulted in a structured module that incorporates essential elements of the Pancasila Student Profile and the principles of ocean literacy. The module was structured around four main phases: introduction, contextualization, action, and reflection, featuring activities that promote student awareness of the relationship between humans and the ocean. The design was based on ocean literacy principles from (Hapidin et al., 2022) and adapted to the local coastal context for meaningful learning.

During the development stage, expert validations showed very high feasibility scores—98% for media, 95% for content, and 95% for language. Revisions based on initial feedback demonstrated the iterative and responsive nature of the development process, resulting in a module that is ready for use without further revisions. This confirms the effectiveness of feedback-driven development and field trials in ensuring educational product quality.

In the dissemination stage, the module proved not only to be valid in terms of content and design but also practical and useful according to teachers and students. Practicality and attractiveness were rated at 100% by practitioners, indicating that the module successfully encourages student engagement in project-based learning. This was further supported by students’ ocean literacy assessment results, which showed high levels of achievement in knowledge (87%),

attitude (88.5%), and behavior (88.2%) toward the ocean. These results align with comprehensive ocean literacy competencies that include cognitive, affective, and psychomotor domains.

Overall, this module effectively addresses the need for contextual learning in coastal areas, integrates sustainability values with the Pancasila Student Profile, and significantly enhances students' ocean literacy. These findings support previous research (Maulida, 2023) (Syafi'i, 2021) which emphasizes the importance of contextual, collaborative, and character-based learning in primary education. Therefore, this module has strong potential to serve as an innovative and replicable learning resource for other coastal schools or regions facing similar environmental challenges.

## CONCLUSION

This study successfully developed a project-based module to strengthen the Pancasila Student Profile through ocean literacy on the theme of Sustainable Lifestyle for Phase B in elementary school, utilizing the Four-D model (Define, Design, Develop, Disseminate). The resulting module demonstrated a high level of validity across various aspects.

Expert validation results showed that:

- Media validation increased from an average score of 90% to 98% (highly valid),
- Content validation increased from 90% to 95% (highly valid),
- Language validation increased from 87.5% to 95% (highly valid).

Feedback from the dissemination phase indicated that the module was:

- Very easy to use (96.25%),
- Highly beneficial (100%),
- Very engaging (100%).

In addition, student assessments showed strong ocean literacy achievements, including:

- Marine knowledge (87%),
- Attitude towards the ocean (88.5%),
- Behavior towards the ocean (88.2%).

Thus, the project module is considered highly feasible, effective, and innovative in supporting learning that fosters awareness and sustainable attitudes through the integration of ocean literacy and the values of the Pancasila Student Profile.

Implications for students, the developed module is expected to enhance their awareness and foster sustainable attitudes by encouraging the application of sustainability values in everyday life. For educators, the module offers a practical and structured framework to implement ocean literacy-based learning while strengthening the values of the Pancasila Student Profile. For schools, the study highlights the importance of institutional support in facilitating project-based learning through adequate resources and by embedding marine environmental awareness into the school culture. Lastly, for future researchers, this study serves as a valuable reference for the development of similar innovative modules and provides insights into strategies that can further enhance the understanding and application of sustainability education for both educators and learners.

## REFERENCES

Amalina, U. A., Karnan, K., & Lestari, T. A. (2023). Relation between Ocean Literacy and Science Learning Outcomes of Class IX SMPN 04 Keruak, Lombok Timur 2022. *Jurnal Ilmiah Profesi Pendidikan*, *8*(1), 272–278. https://doi.org/10.29303/jipp.v8i1.1190

Amani, S. R., Rahman, T., & Supriatno, B. (2021). Profil literasi kelautan siswa SMKN Pulau Tidung melalui kegiatan ekstrakulikuler sekolah pantai Indonesia ( Ocean literacy profile student of Tidung Island vocational high school through Indonesian coastal school

extracurricular activities ). *Assimilation: Indonesian Journal of Biology Education*, *4*(1), 37–43.

Anwar, R. N. (2023). *2023 Revised: February 16*. *1*(1), 102–109.

Apriani, A., & Sari, I. P. (2020). Penguatan Karakter Nasionalisme Generasi Alphamelalui Living Values Education Program (LVEP). *LITERASI (Jurnal Ilmu Pendidikan)*, *11*(2), 67. https://doi.org/10.21927/literasi.2020.11(2).67-79

Arwan, J. F., & Ali, M. (2023). Ocean Literacy Competency : What Competencies Do Students Need Regarding Alignments with the Sea? *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, *9*(2), 365. https://doi.org/10.33394/jk.v9i2.7805

Asikin, N., Suwono, H., Sumitro, S. B., & Dharmawan, A. (2023). *Tren penelitian literasi kelautan di Indonesia : Analisis bibliometrik*. *13002*.

Eka, N., & Hindrasti, K. (2021). Pelajar dan Laut : Literasi Laut di Tanjungpinang, Indonesia. *Jurnal Penelitian Pendidikan IPA*, *7*(3). https://doi.org/10.29303/jppipa.v7i3.725

Fadhilah, H., Burhan, M. A., & Estuhono, E. (2021). Pengembangan Modul IPA Berbasis Model Research Based Learning Untuk Mengembangkan Keterampilan Four Cs Pada Tema Indahnya Kebersamaan Di Sekolah Dasar. *Innovative: Journal Of Social Science Research*, *1*(2), 81–86. https://doi.org/10.31004/innovative.v1i2.2179

Fielding, S., Copley, J. T., & Mills, R. A. (2019). Exploring our oceans: Using the global classroom to develop ocean literacy. *Frontiers in Marine Science*, *6*(JUN), 1–7. https://doi.org/10.3389/fmars.2019.00340

Gje, G. C., Idjg, D. G., Egdk, C. D. I., & Hb, C. I. (2019). *Komunitarian_Masyarakat_Nelayan_Indonesia_Kawasan_*. *10*, 2–9.

Hapidin, Syarah, E. S., Pujianti, Y., & Gunarti, W. (2022). Instilling Children's Ocean Literacy Through Comic Media: STEAM to R-SLAMET Learning Design for ECE educators. *JPUD - Jurnal Pendidikan Usia Dini*, *16*(1), 01–16. https://doi.org/10.21009/jpud.161.01

Hindrasti, N. E. K. (2018). Reorientasi Pembelajaran Sains Berbasis Literasi Kelautan. *BIOEDUKASI: Jurnal Pendidkan Biologi*, *11*(2), 81–86. http://dx.doi.org/10.20961/bioedukasi-uns.v11i2.22842

Hindrasti, N. eka kusuma. (2018). Pengembangan Instrumen Penilaian Literasi Kelautan untuk Siswa Sekolah Menengah Atas. *Jurnal Kiprah*, *6*(2), 1–7. https://doi.org/10.31629/kiprah.v6i2.855

Irawan, B. (2018). Framework Literasi Kelautan Sebagai Acuan Pembelajaran Sains di Negara Maritim. *Pedagogi Hayati*, *2*(1), 14–23. https://doi.org/10.31629/ph.v2i1.413

Kelly, R., Evans, K., Alexander, K., Bettiol, S., Corney, S., Cullen-Knox, C., Cvitanovic, C., de Salas, K., Emad, G. R., Fullbrook, L., Garcia, C., Ison, S., Ling, S., Macleod, C., Meyer, A., Murray, L., Murunga, M., Nash, K. L., Norris, K., … Pecl, G. T. (2022). Connecting to the oceans: supporting ocean literacy and public engagement. *Reviews in Fish Biology and Fisheries*, *32*(1), 123–143. https://doi.org/10.1007/s11160-020-09625-9

Markos, A., Boubonari, T., Mogias, A., & Kevrekidis, T. (2017). Measuring ocean literacy in pre-service teachers: psychometric properties of the Greek version of the Survey of Ocean Literacy and Experience (SOLE). *Environmental Education Research*, *23*(2), 231–251. https://doi.org/10.1080/13504622.2015.1126807

Maulida, U. (2023). Sustainable Lifestyle Throught Project of Strengthening Pancasila Student Profiles. *Jurnal Pemikiran Dan Pendidikan Dasar*, 14–21.

Maydiantoro, A. (2019). Model-Model Penelitian Pengembangan (Research and Development). *Jurnal Metode Penelitian*, *10*, 1–8. http://repository.lppm.unila.ac.id/34333/1/Model-Model Penelitian dan Pengembangan.pdf

McCauley, V., McHugh, P., Davison, K., & Domegan, C. (2019). Collective intelligence for advancing ocean literacy. *Environmental Education Research*, *25*(2), 280–291. https://doi.org/10.1080/13504622.2018.1553234

Muattininggar, M. A. P. P., Ratnasari, F. D., Sejati, M. P., & Mahardika, A. (2023). Metode Pembelajaran Bersiklus yang Berbasis Aofic Indeso Guna Mengoptimalkan Potensi Lokal Berdasarkan Literasi Maritim. *Saintek: Jurnal Sains Teknologi Dan Profesi Akademi Angkatan Laut*, *16*(1), 1–9. https://doi.org/10.59447/saintek.v16i1.108

Pazoto, C. E., Silva, E. P., Andrade, L. A. B., Favero, J. M. Del, Alô, C. F. S., & Duarte, M. R. (2022). Ocean Literacy, formal education, and governance: A diagnosis of Brazilian school curricula as a strategy to guide actions during the Ocean Decade and beyond. *Ocean and Coastal Research*, *69*, 1–14. https://doi.org/10.1590/2675-2824069.21008cep

Pratiwi, P. H., Novriza Setya Dhewantoro, H., Agustina, D., & Disyacitta, F. (2023). Pelatihan dan Pendampingan Penyusunan Modul Projek Berbasis Literasi Sosial bagi Guru SMA Daerah Istimewa Yogyakarta. *Inovasi Jurnal Pengabdian Masyarakat*, *1*(3), 365–376. https://doi.org/10.54082/ijpm.267

Purnawanto, A. T. (2022). Implementasi Profil Pelajar Pancasila dalam Pembelajaran Kurikulum Merdeka. *Jurnal Ilmiah Pedagogy*, *21*(1), 78.

Putra, M. J. A., & Nisa, M. (2018). The Development of Monopoly Game as Media for Science Learning at Elementary School. *Al-Ishlah: Jurnal Pendidikan, 13*(3), 1786-1798.

Putri Andini Nasution, Rian Vebrianto, & Yovita, Y. (2024). Penilaian dan Evaluasi Modul P5 Tema Gaya Hidup Berkelanjutan pada Materi Keseimbangan Ekosistem. *Jurnal Pendidikan Mipa*, *14*(1), 1–8. https://doi.org/10.37630/jpm.v14i1.1385

Rachmawati, N., Marini, A., Nafiah, M., & Nurasiah, I. (2022). Projek Penguatan Profil Pelajar Pancasila dalam Impelementasi Kurikulum Prototipe di Sekolah Penggerak Jenjang Sekolah Dasar. *Jurnal Basicedu*, *6*(3), 3613–3625. https://doi.org/10.31004/basicedu.v6i3.2714

Rika Widianita, D. (2023). Penerapan Model Snowball Throwing dengan Media TTS Meningkatkan Hasil Belajar Siswa Pada Pembelajaran IPA Lingkungan Kelas III SD Islsm Terpadu Al Ibrohimi Manyar Gresik. *AT-TAWASSUTH: Jurnal Ekonomi Islam*, *VIII*(I), 1–19.

Ristek, K. (2021). Profil Pelajar Pancasila. *Kementerian Pendidikan Dan Kebudayaan*, 1–108.

Rizal, M., Iqbal, M., & Rahima, R. (2022). Pelatihan Merancang Modul Projek Profil Pelajar Pancasila Bagi Guru Sdn 6 Peusangan Selatan Melalui in House Training Sekolah Penggerak. *Community Development Journal : Jurnal Pengabdian Masyarakat*, *3*(3), 1574–1580. https://doi.org/10.31004/cdj.v3i3.6878

Rizky Satria, P. A., Sekar, W. K., & Harjatanaya, T. Y. (2022). Projek Penguatan. *Projek Penguatan Profil Pelajar Pancasila*, 138.

Rona, S. P., & Nurlizawati, N. (2024). Efektivitas Penerapan Projek Gaya Hidup Berkelanjutan dalam Menguatkan Karakter Profil Pelajar Pancasila (Beriman, Bertaqwa Kepada Tuhan YME, Bergotong-royong, Kreatif) di SMA Negeri 8 Padang. *Naradidik: Journal of Education and Pedagogy*, *3*(1), 55–65. https://doi.org/10.24036/nara.v3i1.189

Sari, W. K., & Wilujeng, I. (2021). *Mengkaji Perlunya Literasi Kelautan di Kelas Sains Indonesia*. *528*(Icriems 2020), 702–707.

Silalahi, A. (2018). Development Research (Penelitian Pengembangan) dan Research & Development (Penelitian & Pengembangan) Dalam Bidang Pendidikan/Pembelajaran. *Research Gate*, *July*, 1–13. https://doi.org/10.13140/RG.2.2.13429.88803/1

Sugiyono. (2014). *Metodologi Penelitian Kuantitatif, Kualitatif dan R & D*. Alfabeta.

Syafi'i, F. F. (2021). Merdeka belajar: sekolah penggerak. *Prosiding Seminar Nasional Pendidikan Dasar "Merdeka Belajar Dalam Menyambut Era Masyarakat 5.0," November*,

Vol. 8, No.2, August 2025, pp. 57 - 70
DOI: http://dx.doi.org/10.33578/jtlee.09.01.05
ISSN : 2615-4528 (Print) 2622-3023 (Online)

46–47.

Utami, F. P., Karnan, K., Handayani, B. S., & Mahrus, M. (2021). Identifikasi Kemampuan Literasi Kelautan Siswa Sekolah Menengah Pertama (SMP) di Kawasan Ekonomi Khusus (KEK) Mandalika, Lombok Tengah. *Jurnal Ilmiah Profesi Pendidikan*, *6*(1), 81–86. https://doi.org/10.29303/jipp.v6i1.160

Wulandari, W., Haryono, H., & Diana, D. (2023). Projek Penguatan Profil Pelajar Pancasila Berbasis Core Values Bruder Fratrum Immaculatae Conceptionis Indonesia. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *7*(5), 5303–5316. https://doi.org/10.31004/obsesi.v7i5.5355

Wulansari, S., Korespondensi, E., Pancasila, P. P., Pancasila, P. P., & Kritis, B. (2023). *Pengembangan Projek Penguatan Profil Pelajar Pancasila Berbasis Budaya Islam pada Dimensi Bernalar Kritis untuk Usia 5-6 Tahun di TK Islam Hidayatullah Semarang*. 519–528. https://doi.org/10.47709/educendikia.v3i03.3304

Zulhaida, S. (2023). Pengembangan E-Modul Projek Penguatan Profil Pelajar Pancasila Dalam Implementasi Kurikulum Merdeka Di SDN Pengasinan 1. *UIN Syarif Hidayatullah Jakarta*.