

Implementation of the Pancasila Student Profile Strengthening Project Through the Utilization of Pine Fruit Waste for Entrepreneurial Skills

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Abstract

Purpose: This study aims to elucidate the implementation of the Pancasila Student Profile Strengthening Project (P5) in fostering entrepreneurial skills among elementary school students and to analyze its impact on the development of those skills, particularly through the utilization of pine fruit waste.

Methodology: A qualitative descriptive approach with a case study design was applied. Data were gathered using interviews, observations, and document analysis. The research subjects included the school principal, three classroom teachers (grades 4–6), nine students, and supporting documents such as P5 modules and student project outcomes. Data validity was ensured through triangulation of techniques and sources.

Results: The study found that the implementation of P5, from planning to execution, was conducted effectively. The project significantly contributed to students' entrepreneurial competence, including creativity, decision-making, problem-solving, independence, and collaboration. Key success factors included strong involvement of school leadership, teacher engagement, the formation of positive habits, and parental support. However, challenges were noted in areas such as teachers' limited understanding of P5, technological adaptation, student skill variation, and marketing of products.

Applications/Originality/Value: This research provides a practical reference for integrating entrepreneurship within character education using local resources. It demonstrates how the P5 framework can serve as a strategic vehicle for instilling 21st-century competencies in elementary school students through project-based learning rooted in contextual relevance.

Introduction

Environmental issues arising from waste are frequently encountered, primarily due to inadequate management practices (Andolo et al., 2023). Waste is leftover material that is no longer used and has no economic value (Naully et al., 2023). Waste that is not properly processed can cause various negative effects, such as water, soil, and air pollution, and endanger human health and ecosystems (Herman et al., 2023). Waste can be classified into several types, such as organic and inorganic solid waste that comes from daily human activities and natural processes (Ruzuqi et al., 2023). Organic waste can come from plants, animals, and agricultural residues (Ndaou et al., 2023). If not managed properly, large amounts of organic waste such as animal manure, sewage sludge, and plant residues can pose a serious threat to the environment (Guo et al., 2020). One source of organic waste is the pine tree.

Pine trees, classified as coniferous species, are predominantly found in mountainous areas, including Depok Village in the Bendungan District of Trenggalek Regency, East Java. The geographical conditions of this region facilitate the thriving growth of dense pine forests and a plentiful supply of pine cones; however, these resources remain largely unutilized and are often discarded as organic waste (Manullang et al., 2023). The fruit produced by the pine tree is commonly known as pine nuts (Ulfa, 2019). Pine cones are distinctive fruits that possess unique characteristics, setting them apart from typical fruits, which generally exhibit a soft texture and are susceptible to wilting (Purnomo et al., 2021). Pine cones are frequently left scattered and underutilized, despite their potential for diverse applications. One notable use is as a material for handicrafts, which can yield unique products with considerable aesthetic appeal (S. Haisah, Ariawan, 2024). In this context, the Pancasila Student Profile Strengthening Project (P5) under the Independent Curriculum promotes the development of student skills through project-based learning, which may incorporate the use of natural materials, such as pine cones.

The Pancasila Student Profile Strengthening Project (P5) represents one aspect of extracurricular activities within the framework of the Independent Curriculum (Nevrita & Sujoko, 2023). The Pancasila Student Profile Strengthening Project

aims to shape students who can act based on Pancasila values, namely having faith and devotion to God Almighty, appreciating global diversity, fostering cooperation, achieving independence, thinking critically, and being creative (Rachman et al., 2024). This illustrates that the Pancasila Student Profile not only emphasizes cognitive aspects but also encompasses attitudes and behaviors that reflect their identity as Indonesian citizens and global citizens (Widana et al., 2023). The emergence of the Pancasila student profile is influenced by the rapid development of technology, socio-cultural dynamics, environmental changes, differences in the world of work, and the future of education in various levels and fields of culture (Maimunah & Minsih, 2023).

The vision of Indonesian education is to realize a sovereign, independent, and characterful Indonesia through the formation of Pancasila students (Sulistiyaningsih & Sujarwo, 2023). The new learning paradigm integrates the Pancasila Student Profile into the learning process (Nawafil & Junaidi, 2020). One of the steps to strengthen the dimensions of the Pancasila Student Profile is by designing a learning model that aligns with existing policies and focuses on the Merdeka Curriculum, which implements a fun learning approach without pressure and is student-centered (Fadlillah, 2019); (Fauziah et al., 2023); (Munir et al., 2024). One of the learning models that applies a student-centered learning approach is project-based learning. The implementation of the Pancasila student profile development nationally is integrated through project-based learning (Susilawati et al., 2021). Project-based learning provides opportunities for students to experience a learning process that not only enhances knowledge but also strengthens character and offers chances to learn from their surroundings (Aulia et al., 2023).

Entrepreneurship is one of the examples of project-based learning and is an important aspect in the formation of an independent, creative, and competitive Pancasila student profile (Noviani et al., 2022). Entrepreneurship education provides students with the opportunity to engage in entrepreneurial tasks, such as analyzing business feasibility, preparing business plans, and executing their business plans (Wardana et al., 2020). Entrepreneurship education plays an important role in providing opportunities for students to become innovative, creative, independent individuals, as well as resilient leaders in facing various challenges (Iwu et al., 2021). Through entrepreneurship education, students will also learn entrepreneurial skills that include creativity, innovation, leadership, problem-solving, and decision-making, as well as the ability to take risks and see opportunities in creating and managing businesses (Putri et al., 2021). Through learning entrepreneurship, students will not only be prepared to face future challenges, but they will also be able to create new ideas that are beneficial for themselves and others (Amin et al., 2020).

There have been several previous studies on the Pancasila Student Profile Strengthening Project with a focus on the entrepreneurship theme. Research conducted by (Hardiyanto et al., 2023); (Hidayat et al., 2023); (Noviani et al., 2022); (Shalikhah, 2022); and (Sobakh et al., 2023). The results show that the Pancasila Student Profile Strengthening Project has significantly fostered an entrepreneurial spirit and improved students' abilities. However, the research has not yet addressed the implementation of P5 at the elementary school level. Most existing studies have focused more on the implementation at the senior high school (SMA) level, thus not providing a detailed picture of how teachers implement P5 in elementary schools. Then the research conducted by (Aulia et al., 2023); (Firdaus & Diah Utami, 2023). The results show that the implementation of P5 with an entrepreneurship theme can help students develop competencies and the character profile of Pancasila students, namely being devout, pious to God Almighty, and having noble morals, global diversity, cooperation, independence, critical thinking, and creativity. However, this study only discusses the implementation of activities and has not yet included the impact of the implementation results on students.

Based on the background above, there has not yet been any research examining the implementation and impact of the Pancasila Student Profile Strengthening Project (P5) with an entrepreneurship theme on elementary school students. Therefore, additional research is needed to discuss the implementation and impact of the Pancasila Student Profile Strengthening Project (P5) with an entrepreneurship theme on elementary school students. The purpose of the research is to describe the implementation of the Pancasila Student Profile Strengthening Project (P5) on the entrepreneurial skills of elementary school students. Another objective is to analyze the impact of P5 on the entrepreneurial skills of elementary school students. This research is expected to provide deeper insights into the implementation of P5 at the elementary school level and its impact on the development of students' entrepreneurial skills so that the results can serve as a reference for policymakers in enhancing entrepreneurship programs in elementary schools.

Method

Type and design of research

This research uses a qualitative approach with Case Study design. Research that combines descriptive and qualitative approaches is called descriptive qualitative research (Ridwan et al., 2021). Researchers conducted field activities to gather relevant information, analyze the obtained data, and then present it in a descriptive form to describe the implementation process of the Student Profile Strengthening Project by utilizing pine cone waste as a material for handicraft production. Descriptive analysis was carried out to provide a systematic and accurate depiction of the facts on the ground. Data collection techniques include interviews, observations, and documentation. Primary data was obtained from the Principal,

Class Teachers, and Students at SD Negeri 3 Depok. Secondary data came from the observation and documentation of the P5 module and the outcomes of the P5 implementation.

Object and subject of the research

The object of this research is the Pancasila Student Profile Strengthening Project (P5) in entrepreneurship by utilizing pine fruit waste. This research requires several subjects, namely the Principal, 3 Class Teachers (specifically the 4th, 5th, and 6th-grade teachers), and 9 students. The description of the informants can be seen in Table 1. below:

Table 1. Data informant

Informant Initials	Gender	Role
Tt	Male	Principal
Sn	Female	5th Grade Teacher
ZL, DW, AD	Male and Female	5th Grade Student
Sk	Female	6th Grade Teacher
AK, PD, AZ	Male and Female	6th Grade Student
DK	Male	4th Grade Teacher
AD, GA, RS	Male and Female	4th Grade Student

Based on the interviews conducted by the researcher, it can be understood how the actual conditions are in the implementation process of the Entrepreneurial Student Profile Strengthening Project by utilizing pine fruit waste that occurs in the field. In addition to observation and interviews, this research requires documentation to complement the obtained data, which includes Module P5, activity photos, and interview transcripts. The focus of this research refers to how the implementation of P5 in elementary schools begins with the stages of planning, execution, and reflection or follow-up as one form of policy in the Merdeka Curriculum and the impact generated from the implementation of P5 on students' entrepreneurial skills.

Data validity and data analysis

The data validity test used in this study is triangulation by seeking supporting data from other sources and the process of verifying the data obtained from the data providers to the researchers. The triangulation used is technique and source triangulation. The data obtained is then analyzed using the Miles & Huberman model, which includes reduction, data presentation, and drawing/verifying data conclusions (Miles et al., 2016).

This research uses a qualitative method. According to Saragih et al. (2021), qualitative research is research that intends to understand the phenomenon of what is experienced by the research subject of behavior, perception, motivation, action, etc., holistically, and by means of description in the form of words and language, in a special context that is natural and by utilizing various natural methods. The research design used is qualitative descriptive, which is used to accurately describe some of the content of character values in the Indonesian textbook grade VII MTs.

This research was carried out at MTsN 13 Boyolali which is located on Sendangdowo street, Gejungan hamlet, Tanjung village, Klego District, Boyolali Regency. The data in this study are the content of character values contained in Indonesian textbooks and the results of interviews with students of the school. The data sources in this study are Indonesian textbooks and interviews with students. The data collection techniques used in this study are interviews, observations, and documentation. Through interviews with several students, the researcher explored data, information, and caption frameworks from the research subjects. Observations were carried out directly at MTs N 13 Boyolali to obtain data factually and objectively. Documentation is carried out by researchers to obtain data and information in the form of books, archives, and images that support the research.

In this study, a data validity test was used by triangulation of sources including archives and interview results. The archive in this study is in the form of an Indonesian textbook. The results of the interviews in this study are the results of interviews with grade VII students. The data analysis in this study goes through 3 stages, namely data reduction, data presentation and conclusion drawn. In data reduction, it is carried out to select and classify which ones are included in the focus of the analysis studied. The presentation of data is carried out in a descriptive narrative. The forms of data presentation discuss the character values contained in the Indonesian textbook grade VII MTs. While drawing conclusions in this study, the researcher tries to draw a clear conclusion so that readers can understand and understand the results of the research regarding the content of character values in the Indonesian textbook.

Result and Discussion

Instilling an entrepreneurial spirit from an early age through the implementation of P5 for elementary school students is important for students in facing future challenges. Entrepreneurship has become one of the P5 themes that identifies,

develops, and implements creative and innovative business ideas. This is based on several data collected from in-depth interviews with the principal, class teachers, and several students. From the results of the activities, the research findings are 1) Implementation of P5 Entrepreneurship in the Utilization of Pine Fruit Waste; 2) The Impact of P5 on the Entrepreneurial Skills of Students at State Elementary School 3 Depok.

Implementation of the Pancasila Student Profile Strengthening Project (P5) entrepreneurship

The implementation process of P5 Entrepreneurship is through 3 stages, namely planning, execution, and project peak. This context can be seen in Table2.

Table 2. Interview results

Interview Aspects	Description of the interview results	Informan
Planning of P5	"Yes, the P5 planning has been carried out according to the guidelines with coordination meetings through several stages, namely: <ol style="list-style-type: none"> 1. Planning the allocation of time and dimensions of the Pancasila Student Profile 2. Forming the P5 facilitator team 3. Appointing the P5 coordinator 4. The P5 coordinator provides guidance to the P5 facilitator team regarding the planning and implementation procedures of P5 5. Identifying the school's readiness to implement P5 6. The facilitator team determines the P5 theme to be raised." 7. Designing the project module. " 	Tt: Principal DK: 4th Grade Teacher Sn: 5th Grade Teacher Sk: 6th Grade Teacher
Implementation of P5	"Regarding the P5 Planning at this school, it also goes through several stages, namely:" <ol style="list-style-type: none"> 1. Introduction (Searching for initial data and understanding the concept of waste and waste recycling) 2. Contextual (Direct observation and making observation reports, demonstrations, and waste recycling) 3. Action (Real actions with preparation of craft designs, planning the budget for tools and craft materials, and planning marketing) 4. Reflection and follow-up (Identifying the shortcomings and strengths of a series of processes). " 	Tt: Principal DK: 4th Grade Teacher Sn: 5th Grade Teacher Sk: 6th Grade Teacher
Peak of P5	"All members of the school community participated in the P5 culmination organized by the school by holding a Market Day. Students showcased and sold products resulting from P5, attended by residents and parents as a form of appreciation for the students." "There is a Market Day to celebrate the peak of P5 with activities selling our works."	Tt: Principal DK: 4th Grade Teacher Sn: 5th Grade Teacher Sk: 6th Grade Teacher ZL, DW, AD: 5th Grade Students AK, PD, AZ: 6th Grade Students AD, GA, RS: 4th Grade Students

The results of the interview above regarding the planning and implementation of the Pancasila Student Profile Strengthening Project (P5) at this school indicate that the process has been carried out according to well-established

procedures through several stages. Planning begins with a coordination meeting to determine the allocation of time and dimensions of the Pancasila Student Profile, the formation of a facilitator team, and the appointment of the P5 coordinator. The P5 coordinator provides guidance to the facilitator team regarding planning and implementation procedures, while the facilitator team is tasked with identifying the school's readiness and determining the P5 theme. After that, a project module was designed as a guide for implementation. The P5 planning at this school also goes through four main stages. First, is the Introduction Stage, where students seek initial data and learn about the concepts of waste and recycling. Second, is the Contextual Stage, where students conduct direct observations, compile reports, and participate in waste processing demonstrations. Third, the Action Stage involves students in designing crafts, planning budgets, and marketing strategies. Finally, the Reflection and Follow-up Stage aims to identify the strengths and weaknesses of the series of processes. The peak of P5 is celebrated through Market Day.

Table 3. Observation results

Observation Aspect	Result Description
Planning of P5	<ol style="list-style-type: none"> 1. The P5 planning is by the independent curriculum guidelines. 2. The planning has been carried out by the principal through a coordination meeting involving all class teachers. 3. The result of this coordination meeting is the formation of a P5 coordinator and a P5 facilitator team. 4. The facilitators received guidance on the procedures to be followed. 5. The facilitators then prepared the P5 module focusing on entrepreneurship. 6. The P5 Entrepreneurship module was prepared according to the student's interests, talents, and potential.
Implementation of P5	<ol style="list-style-type: none"> 1. The facilitator has carried out each stage of the project according to the guidelines outlined in the prepared P5 module. 2. There was student organization by forming 3 small groups. 3. The stages of project implementation include introduction, contextualization, action, and follow-up reflection. 4. Students enthusiastically followed a series of P5 processes during the facilitator's guidance.
Peak of P5	<ol style="list-style-type: none"> 1. The peak of the project has been carried out through Market Day.

The results of the above observation indicate that the P5 planning has been implemented by the Merdeka Curriculum guidelines. This process began with a coordination meeting initiated by the principal and involving all class teachers, resulting in the formation of the P5 coordinator and facilitator team. Before starting the implementation, the facilitator received guidance on the procedures to be followed, then prepared the P5 module focusing on entrepreneurship, tailored to the interests, talents, and potential of the students. Each stage of the project was carried out according to the guidelines outlined in the module, with the students organized into three small groups. The implementation of the project is divided into four main stages: introduction, contextualization, action, and reflection. Throughout the process, the students showed enthusiasm and high spirits under the guidance of the facilitator. The culmination of this project is celebrated through Market Day, where students showcase and sell their creations.

Based on Table 2, it can be seen that all stages of the P5 implementation have been carried out to hone entrepreneurial skills by utilizing pine cone waste in handicrafts.

Planning stage

The Planning Stage involves several steps that can be seen in the following Figure1.:



Figure 1. Planning project

The planning has been carried out well by the school authorities, namely the Principal and the class teacher. This planning involves a coordination meeting led by the principal along with teachers to discuss the P5 program. Previously, the project time allocation and dimensions of the Pancasila Student Profile had been determined. The principal formed a team of facilitators and P5 coordinators. Then, an analysis of the school's readiness, including facilities, resources, and internal support, was conducted to ensure the project could run smoothly. The P5 coordinator was tasked with providing information and guidance to the facilitators' team to create P5 modules according to their phases and then explaining the responsibilities and duties of the facilitators' team.

The result of the coordination is to adopt an entrepreneurship theme to introduce the entrepreneurial spirit to students from an early age. The form of entrepreneurship is taken by utilizing pine cone waste found in the surrounding environment. The urgency of utilizing pine cone waste as a material for making handicrafts is the processing of organic waste in the surrounding environment, which embodies the spirit of entrepreneurship and environmental care through recycling. Another goal is to introduce students to the local potential that can be developed for the future. The implementation of P5 will be carried out according to the Principal's decree that specifically Saturdays are designated for P5 learning. Subsequently, the facilitator team will prepare the P5 Entrepreneurship module. The teacher conducts coordination and guides students regarding the project procedures in person.

Implementation Stage

The Implementation Stage consists of several steps that are carried out. The steps can be seen in Table 4. Below:

Table 4. Implementation steps of P5

<p>Phase B and C Project Modules</p> <p>Theme : Entrepreneurship Topic : My Pine My Business Total : 57 JP</p> <p>Pancasila Student Profile Dimensions :</p> <ul style="list-style-type: none"> - Creative - Independent - Critical Thinking - Mutual cooperation <p>Underlying Sub-Element :</p> <ul style="list-style-type: none"> - Instilling Environmental Awareness - Identify - asking questions - processing information - social coordination - Entrepreneurship - Creativity - cooperation - Economic value 	<p>Introduction Stage: Recognizing and Building Awareness of pine fruit waste as a type of organic waste in the environment.</p>			
	1. Socialization and assessment of diagnostics	2. Getting to know pine fruit as a type of organic waste	3. Exploring the utilization of pine fruit waste	
	<p>Contextualized Stage: Contextualizing and directly observing pine fruit waste as a type of organic waste in the surrounding environment.</p>			
	4. Study visit to a pine plant site	5. Collecting pine fruit waste for study and utilization	6. Discussing the utilization of pine fruit waste into handicrafts	7. Presenting data on the utilization of pine fruit into handicrafts
<p>Action Stage: Taking concrete action by making handicrafts from pine fruit waste</p>				
8. Prepare craft tools and materials	9. Making pine fruit handicraft designs	10. Making pine fruit handicraft products	11. Exhibition and marketing of pine fruit handicrafts	
<p>Reflection and Follow-up Stage: Identify the strengths and weaknesses of each activity</p>				
12. Evaluation Solution offered for each activity P5		13. Follow-up activities P5		

Based on Table 4, the implementation of the Pancasila Student Profile Strengthening Project (P5) initiates with an introductory stage. During this phase, the facilitator conducts an orientation session to outline the P5 activities and administers a diagnostic assessment to identify students' talents, interests, and potential. Students are introduced to foundational concepts on waste, differentiating between organic and inorganic categories, with a specific focus on repurposing pine cone waste into valuable crafts. The facilitator then organizes the students into three groups—Gotong Royong, Kreatif, and Mandiri—reflecting key dimensions of the Pancasila Student Profile. At this stage, students engage with various learning resources provided by the facilitator, including visual aids, reading materials, worksheets, and formative assessments. The instructional process incorporates observation, Q&A sessions, and group discussions.

In the Contextual Stage, students conduct hands-on observations to identify pine cone waste in their surroundings. The facilitator encourages them to develop interview questions on pine cone waste applications, which they subsequently use to gather insights from community members during a field visit to local pine plantations. These insights are then documented in a report that synthesizes both observational data and interview responses. This process aims to deepen students' understanding of the practical uses of pine cone waste in everyday contexts.

During the Action Stage, students directly apply their knowledge by engaging in craft-making activities. The facilitator leads discussions on different types and designs of crafts derived from pine cone waste. Students collaboratively choose several innovative products to create, such as wall art, miniatures, and home decor. Equipped with the necessary tools and materials, they proceed with crafting, utilizing pine cones as the primary material and incorporating elements like bottles, paper, bamboo, and wood for added creativity. The crafting and finishing processes take place under the facilitator's guidance, with the final products intended for sale to the school community and nearby residents.

The Reflection and Follow-up Stage serves as an evaluative phase, identifying areas for improvement to refine future P5 activities. This phase encourages students to internalize the dimensions of the Pancasila Student Profile by integrating them into daily practices. Students complete the Pancasila Student Profile Achievement Sheet as a reflective exercise, documenting both the processes they experienced and the outcomes achieved.

Peak stage of the project

The final stage of the Pancasila Student Profile Strengthening Project is marked by the Market Day Exhibition, which involves the entire school community, students' parents, and the surrounding community. Market Day serves as a platform for students to showcase and market the products created through the Pancasila Student Profile Strengthening Project. This activity aims to foster an entrepreneurial spirit in students by encouraging them to create handicrafts from the available pine fruit waste in their environment. Additionally, students gain hands-on experience in marketing by directly interacting with visitors. They are also asked to record their sales revenue on a sales report sheet as a form of accountability.

The Impact of the Pancasila Student Profile Strengthening Project on the Entrepreneurial Skills

Amid rapid technological advancements, it is important to equip students with entrepreneurial skills from an early age to prepare them for future economic challenges. The Pancasila Student Profile Strengthening Project through the utilization of pine fruit waste not only provides practical experience in crafting but also equips students with entrepreneurial skills through experiential learning. This context can be seen in Table 5;

Table 5. Interview results

Interview aspects	Description of Interview Results	Informan
Creativity and Innovation	"The creativity of the students is evident in their skills in processing pine cone waste, which was initially considered trash, into valuable handicrafts."	Sn: Fifth Grade Teacher
	"Innovation is demonstrated by utilizing available supporting materials, such as bamboo, wood, paper, and seashells, to create interesting works."	Sk: Sixth Grade Teacher
Problem-Solving	"During the P5 process, there are certain obstacles, especially in finding ways to reduce pine cone waste in the surrounding environment and determining the types of products that can be made from that material. Students are exploring solutions to the waste problem in their surroundings."	Sn: Fifth Grade Teacher
	"The difficulty in finding additional materials, so I try to find substitutes that are available here, such as bamboo and wood."	ZL, DW, AD: Fifth Grade Student
Decision-making	"Students decide for themselves the type of crafts they will make, including the supporting materials they will use."	Sn: Fifth Grade Student
Independence	"This project trains students' independence in completing handicrafts on their own, but the teacher remains present to ensure safety and smoothness of the process."	Sn: Fifth Grade Student
	"I made the crafts myself."	ZL, DW, AD: Fifth Grade Student
Cooperation	"When working on the LKPD in groups, students are indirectly involved in cooperative activities with their peers."	Sn: Fifth Grade Teacher

	"Cooperation is seen in students helping each other. For example, when painting, they help each other and share paint, and some are helped by male friends in cutting wire."	Sn: Fifth Grade Teacher
	"We worked together in preparing Market Day."	ZL, DW, AD: 5th Grade Students AK, PD, AZ: 6th Grade Students AD, GA, RS: 4th Grade Students
Entrepreneurial Spirit	"The enthusiasm of the students during the implementation of P5 shows that they are indirectly developing an entrepreneurial spirit, from planning, and production, to product marketing." "We feel happy because we gained business knowledge."	Tt: Principal DK: 4th Grade Teacher ZL, DW, AD: Fifth Grade Teacher

The interview results regarding the P5 Entrepreneurship program reveal the students' creativity in transforming pine cone waste into economically valuable crafts. They incorporate surrounding materials like bamboo, wood, and paper. A primary challenge is minimizing pine waste and identifying viable products, which motivates students to devise creative solutions. Although guided by a teacher, students independently select crafts and materials. Collaboration is evident in group activities and Market Day preparations. Students' enthusiasm shines through their active participation in planning, creating, and marketing products.

Table 6. Observation results

Observation aspect	Result Description
Creativity and Innovation	Utilizing pine cone waste to create various handicrafts according to students' creativity.
Problem-Solving	Students think critically in seeking simple solutions to reduce problems in their surroundings by processing pine cone waste into valuable handicrafts. Inspiring students to overcome obstacles that arise during the handicraft-making process.
Decision Making	Students dare to choose the type of craft they will make.
Independence	Independence emerges when students complete crafts independently.
Cooperation	The value of cooperation by helping friends in difficulty, working on LKPD in groups, and preparing for Market Day.
Entrepreneurial Spirit	The enthusiasm of students in carrying out a series of product creation processes up to product marketing through Market Day.

Observation results highlight students' creativity in transforming pine cone waste into handicrafts, reflecting both critical thinking and environmental awareness. The challenges encountered have been successfully addressed through students' creativity. They exhibit independence in selecting and completing their crafts, while collaboration is fostered through peer support, worksheet activities, and Market Day preparations. An entrepreneurial spirit is evident in their enthusiasm, from crafting to marketing products on Market Day.

As indicated in Table 5, the Pancasila Student Profile Strengthening Project (P5) significantly enhances students' entrepreneurial skills. Students creatively repurpose pine cone waste—once considered unusable—into crafts with aesthetic and commercial appeal. The variety of crafts includes wall decorations, miniatures, and home decor, showcasing their innovation in combining pine cone waste with materials like bamboo, wood, paper, and seashells. This process not only challenges their imagination but also sharpens their modification and design skills.

Students' problem-solving abilities are evident as they find methods to reduce pine cone waste and develop potential products. They effectively addressed this challenge by innovating solutions, like converting pine cone waste into valuable crafts. When additional materials were scarce, they found alternatives such as bamboo and wood, demonstrating critical and creative problem-solving skills.

Decision-making skills emerge as students independently choose craft types and materials based on their creativity and preferences. They make decisions on both product type and the best available supplementary materials, showing confidence and accountability in project execution.

Independence was notably present throughout the P5 project as students engaged autonomously in the crafting process. They took full ownership, from concept to final product, working independently with minimal teacher assistance. This independence demonstrates their responsibility and confidence in project completion.

Students also displayed teamwork, working on group worksheets and supporting one another in tasks like painting and wire cutting. This collaborative spirit extended to Market Day preparations, where they jointly organized and marketed products, indicating effective communication and cooperation with peers.

The entrepreneurial spirit flourished during the P5 Entrepreneurship program. Students showed enthusiasm at each project stage, actively participating in all aspects, including marketing. This engagement reflects their early development of entrepreneurial understanding and passion, seen in their management of production, marketing processes, and eagerness for entrepreneurial activities.

The successful implementation of the P5 program in elementary schools relies on the combined efforts of key stakeholders. Principals play a crucial role in establishing policies, providing resources, and motivating both teachers and students. Teachers, as facilitators, guide students in developing entrepreneurial skills through pine cone waste while nurturing a creative learning environment. A school culture emphasizing character values also supports P5 success, as does parental involvement in motivating students.

Challenges in implementing P5 include inconsistent teacher understanding, with many needing additional guidance, especially in technology. Additionally, students' crafting skills vary, with some requiring more support. Product marketing remains limited to offline events like Market Day, without online platforms. These challenges present opportunities for schools to innovate and improve future P5 initiatives.

Discussion

In line with the objectives of the Pancasila Student Profile Strengthening Project (P5), this initiative seeks to instill in students a sense of environmental responsibility and practical entrepreneurship skills. By repurposing pine fruit waste into marketable crafts, students learn how to creatively utilize local resources and reduce waste. The project's structure encourages students to explore design ideas that are both attractive and economically valuable, fostering critical thinking and problem-solving skills. The integration of these entrepreneurial practices into the curriculum is intended to equip students with the skills necessary to manage resources, collaborate effectively, and make informed decisions—preparing them to be proactive, responsible, and innovative contributors to society. (Brewer et al., 2022) which states that student involvement in real projects like this plays a significant role in building perseverance and the ability to adapt to changes.

This project also encourages students to better understand the importance of preserving the environment because they utilize pine cones that were initially scattered as raw materials. In line with the research findings (Ongon et al., 2021) This project emphasizes teaching students to wisely utilize available resources and actively engage in environmental preservation. The Pancasila Student Profile Strengthening Project (P5) can enhance students' social and collaborative skills, which are essential components of future entrepreneurial capabilities. Therefore, it is crucial to examine the implementation and impact of the Pancasila Student Profile Strengthening Project (P5) on the entrepreneurial skills of students at State Elementary School 3 Depok.

The integration of entrepreneurship within P5 aims to cultivate students' ability to identify local potential. Consequently, waste from pine cones is transformed into products of economic value. In line with the research, (Boldureanu et al., 2020) states that the implementation of P5 with an entrepreneurship theme also helps students enhance their creativity and entrepreneurial skills from an early age. P5 at Sekolah Dasar Negeri 3 Depok is divided into three stages: planning, implementation, and project culmination.

The planning phase of the Pancasila Student Profile Strengthening Project (P5) commences with a coordination meeting that includes the principal and teachers. Before this meeting, the school established the time allocation and parameters for the Pancasila Student Profile. During the coordination meeting, project implementation procedures were examined, and the school's readiness was assessed to ensure the project's smooth execution. A primary objective of this planning stage is to ensure that the selected theme of entrepreneurship is pertinent to the local needs and opportunities. The school decided to utilize pine cone waste as the primary material for crafting, given its abundance in the surrounding area. By engaging in the processing of this waste, students are not only encouraged to think creatively in developing products but also foster a sense of environmental stewardship by reducing organic waste. This aligns with the research findings (Gherheş et al., 2022); (Halek et al., 2021) Which shows that by processing waste, students learn to think creatively in creating economically valuable products while also contributing to environmental preservation.

The planning stage involves the formation of P5 modules tailored to students' talents and interests, as well as local potential. This module covers the steps that students must take during the project, from understanding pine fruit waste to the product marketing process. Each stage in this module is designed to help students understand the concept of entrepreneurship in a fun and relevant way. This is in line with the research (Logan et al., 2020); (Rahmawati et al., 2019); (Seruni et al., 2020); (Yulando et al., 2019) The implementation of the Pancasila Student Profile Strengthening Project (P5) follows structured stages designed to enhance student engagement and comprehension of entrepreneurial concepts.

In the introduction stage, the facilitator provides foundational knowledge about waste types, focusing on organic waste like pine cones, highlighting its potential for transformation into valuable products. This phase also involves students observing their environment to identify and gather pine cone waste for practical use.

The next phase is contextualization, where students plan and design crafts by repurposing the collected pine cones. This stage fosters collaboration and inquiry, with students engaging in group discussions, observing existing uses, and interviewing community members who have previously worked with pine waste. These activities not only deepen understanding but also serve as primary data sources. The students compile their findings into a report, reflecting the project's research-oriented approach, which supports both the creative process and aligns with documented learning outcomes. This structured, step-by-step approach helps students grasp the underlying principles of entrepreneurship and environmental stewardship embedded in the P5 project. (Lackéus, 2020); (Lynch et al., 2021) This shows that by engaging in group discussions, observations, and data collection, students will be helped to understand the real application of entrepreneurship concepts. By learning to compile reports, students can develop analytical and communication skills that are important for life (Sokhanvar et al., 2021).

In the action stage of the Pancasila Student Profile Strengthening Project (P5), students actively apply their acquired knowledge by crafting products from pine cones. The resulting products are diverse, including wall decorations, miniatures, and home decor. Working in groups, students collaborate on each phase—from design to creation and refinement—with support from the facilitator. This hands-on process requires budget planning and incorporates additional materials like bamboo and wood, along with basic marketing strategies to prepare for Market Day, where their creations will be displayed and sold. Through this experience, students build teamwork, planning, and resource management skills, essential for nurturing early entrepreneurial abilities. These activities not only help students understand product development but also expose them to real-world applications of cost management and strategic thinking, laying a strong foundation for entrepreneurial growth (Galvão et al., 2020); (Ratten & Usmanij, 2020).

The concluding phase of implementation is reflection, during which students are encouraged to assess their experiences, identify challenges encountered, and propose solutions for future project improvements. This reflective process is a vital component of learning, as it enables students to recognize their strengths and weaknesses in managing entrepreneurial initiatives. Participating in reflective activities allows students to evaluate their progress and fosters a greater sense of responsibility toward the tasks assigned to them (Howell, 2021); (Veine et al., 2020).

Through a series of culminating processes, the peak of this project is held through Market Day. All school residents, parents of students, and the surrounding community are invited to see the students' works. Market Day not only serves as a product exhibition but also as an opportunity for students to sell their products and interact directly with buyers. Experiences like this provide students with a real picture of how the entrepreneurial process works, from production to marketing (Komulainen et al., 2020); (Metallo et al., 2020).

The implementation of the Pancasila Student Profile Strengthening Project (P5) with an entrepreneurship theme has significantly influenced the enhancement of students' entrepreneurial skills. This initiative encourages students to think creatively about transforming pine cone waste, previously deemed worthless, into marketable products. The students' creativity is showcased through the diverse array of items they produce, including wall decorations, miniatures, and home decor. Additionally, innovation is fostered as students incorporate supplementary materials readily available in their surroundings, such as bamboo and wood, to enhance their product designs (Hadi et al., 2023); (Hardiyanto et al., 2023) which states that P5 with an entrepreneurship theme can train students to think creatively and innovatively.

During the implementation of the project, students faced various challenges, ranging from how to process pine fruit waste to finding the right product design. This process teaches them to think critically and seek creative solutions to the problems they face (Fahri et al., 2023); (Holilah et al., 2024). For example, when students have difficulty obtaining additional materials, they learn to utilize resources.

The Pancasila Student Profile Strengthening Project with an entrepreneurship theme gives students the freedom to choose the type of handicraft they want to create. The decision-making process is carried out through group discussions, which train students to learn to collaborate and reach a mutual agreement with their group members (Griffiths et al., 2020); (Supena et al., 2021). They are also taught to consider economic aspects, such as budgets and product selling prices.

Student independence is also trained during the project, especially in terms of completing tasks independently. However, cooperation among students remains an important part of this process. Students learn to help each other and work together in completing the project, both during product creation and Market Day preparation. Students help their peers to complete tasks (Minsih & et, 2023). (Ikhsan et al., 2023); (Rozhana et al., 2023) Which states that the Pancasila Student Profile Strengthening project trains students' independence and cooperation.

Through a series of stages that have been undertaken, students not only acquire technical skills in crafting but also gain a deep understanding of entrepreneurship. From the planning process, and production, to marketing, students are taught to think like entrepreneurs (Thanasi-Boçe, 2020). Direct experience in P5 equips students to face future economic challenges (Bueno & Ramos, 2023).

The success of the P5 Entrepreneurship program is closely tied to the leadership role of the principal. This is in line with the opinion of (Annafi & et, 2024); (Maula & et, 2023) which states that the principal plays a pioneering role in Pancasila leadership to form a quality P5. Moreover, the role of the teacher as a facilitator is also very crucial. Teachers not only teach but also guide, train, and direct students, in their roles as educators and facilitators (Yulianto & Et, 2024).

Positive habits in the school environment, such as politeness, cooperation, and environmental care, become the main foundation in the implementation of P5. In line with the research (Putrie & et, 2023) state that a positive culture integrated into P5 learning supports the implementation of P5. Parental involvement in providing support and appreciation for students' achievements in P5. Parental support is also an important factor in strengthening the implementation of P5 (Sari & et, 2023).

The implementation of the P5 Entrepreneurship certainly faces several obstacles, namely the teachers' understanding of P5 is not yet comprehensive. In line with (Azahra & et al, 2024) which states that teachers do not yet fully understand the P5 concept. Teachers' ability to utilize technology to support P5 learning is still limited, even though technology is very important in the implementation of the Merdeka Curriculum. This is important because technology can support the implementation of the Merdeka Curriculum by teachers, students, and schools (Rosmana & et al, 2023). Students have varying hand skills, and some students need more guidance. Additionally, the marketing of Project products is still limited to offline activities such as Market Day and has not yet utilized online platforms.

Conclusion

Based on the research on the Implementation of the Pancasila Student Profile Strengthening Project (P5) through the utilization of pine fruit waste for entrepreneurship skills at SDN 3 Depok, it can be concluded that all stages have been carried out very well, from planning to the peak of the project. At the planning stage, the school coordinated to determine the entrepreneurship theme, utilizing pine cone waste as the main material for handicrafts. This stage also involved the formation of a facilitator team tasked with preparing the P5 module and providing guidance to students. At the implementation stage, students were equipped with knowledge about pine cone waste and assigned the task of transforming it into valuable products through direct observation and handicraft creation. Students then market their creations on Market Day, which serves as the project's conclusion.

The impact of this P5 is seen in the development of students' entrepreneurial skills, such as creativity, problem-solving, decision-making, independence, and cooperation. Students successfully created various innovative products from pine fruit waste, solved challenges related to additives, and worked both independently and in groups. In addition, marketing activities through Market Day provide students with direct entrepreneurial experience, strengthening their entrepreneurial spirit from an early age. Nevertheless, challenges such as varying teacher understanding and limited product marketing indicate that further evaluation and innovation are needed for the future implementation of P5 to be better

Acknowledgments

The author expresses gratitude to Allah SWT for His grace in completing this article. The author also expresses gratitude to both parents and friends who have supported and prayed for the author during the writing process of this article. Thank you to SD Negeri 3 Depok for being willing to be the research site, and thank you to the parties that the author cannot mention one by one.

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