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STRENGTHENING PRIMARY SCHOOL IPAS COMPETENCIES THROUGH CONTEXTUAL LEARNING

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Abstract

Natural and Social Sciences (NSP) learning in elementary schools still faces challenges in connecting abstract concepts with students' real-life contexts. This research aims to improve the IPAS competence of phase A, B, and C students through a contextual teaching and learning (CTL) approach. Activities were carried out through community service at SD Negeri Kesamben 07 in February-June 2025 with the subject of phase A (grade 2), B (grade 3), and C (grade 5) students. The implementation method includes initial observations, designing contextual teaching tools, implementing hands-on learning, and evaluation through pretests and posttests. Results showed significant improvement: student learning completeness increased from 26-38% in the pretest to 95-100% in the posttest. Students showed better understanding of waste classification, landscape recognition, and flora and fauna distribution.

Keywords: Contextual learning, IPAS, elementary school, student competencies, environment

1. Introduction

Learning Natural and Social Sciences (IPAS) in the Merdeka Curriculum has integrated science and social studies materials in one learning theme to provide a holistic, multidisciplinary, and contextual understanding for students (Suhelayanti, Z, and Rahmawati 2023). This helps students to better understand the relationship between natural and social aspects in daily life, especially about the condition of their community or environment. In phases A, B, and C of primary school, IPAS learning has an important role in shaping students' science and social literacy through an approach that emphasizes concrete and contextual experiences.

IPAS learning requires learning strategies that are able to connect abstract concepts with the reality of life, so that learning becomes more relevant and applicable to students' lives. This is where the importance of learning strategies that involve direct involvement of students, for example through observation, environmental projects, to the utilization of concrete media around them. Unfortunately, there are still many IPAS lessons in elementary schools that are textual and lack interaction with the surrounding environment.

The contextual approach or Contextual Teaching and Learning (CTL) is one of the appropriate approaches to overcome the above. The implementation of learning with the CTL approach can make students understand abstract concepts directly through their experiences with the surrounding environment (Santika, et al, 2022). As with the understanding of CTL, namely the concept of learning that helps teachers link the material taught with the real world situation of students (Nurhaedah 2012).

However, in reality, there are still many obstacles in implementing IPAS learning, especially through the CTL approach. This problem is also evident at UPT SD Negeri Kesamben 07, where some teachers still lack understanding of contextual learning

strategies (CTL) and do not fully utilize the surrounding environment as a learning resource. As a result, students only understand the concepts in the material through books, and teachers do not use varied and concrete learning media or methods. This makes it difficult for students to understand abstract IPAS material. As a result, students are less engaged in the learning process.

Several studies have discussed the advantages of contextual learning, showing that learning with a contextual approach can improve students' understanding of IPAS. In the study by Mazidah and Sartika (2023), it was found that the CTL approach influences students' cognitive learning outcomes in science subjects. (Susanto et al. 2024) also found that the implementation of the contextual learning approach can optimize and improve learning evaluation scores. From these studies, it can be concluded that the implementation of the CTL approach in learning that connects the material to students' real lives can improve student learning outcomes.

However, both studies only examined the influence of CTL on the cognitive aspects of science subjects in general and did not explore the thematic application of CTL in the IPAS domain, which integrates social, environmental, and 21st-century skills. Meanwhile, the study by Susanto et al. (2024) focused more on improving evaluation results through the CTL approach in a specific class without detailing its influence in the context of learning phases A, B, and C in elementary schools. Neither study addressed the implementation of CTL broadly across various phases (lower and upper grades). Therefore, this study was conducted to address this gap by applying CTL comprehensively and across phases, emphasizing the importance of student engagement through real-world, environment-based activities.

This real-world, environment-based engagement is particularly relevant in IPAS learning on topics such as types of waste, landscapes, and the distribution of flora and fauna, which inherently require the use of the environment and concrete media. Therefore, the application of a contextual approach (CTL) in learning is necessary to enhance the IPAS competencies of elementary school students in phases A, B, and C. Based on this, the author conducted a community service program aimed at improving the IPAS competencies of elementary school students in phases A, B, and C through contextual learning on types of waste, landscapes, and the distribution of flora and fauna

2. Method

This service activity was carried out at SD Negeri Kesamben 07 in February-June 2025, involving students from phase A (grades 2), phase B (grades 3), and phase C (grades 5).

2.1. Pre-Activity

Prior to the implementation of the service activities, direct observations were made during the teach ing assistance program at UPT SDN Kesamben 07 which aimed to identify the problems faced by teachers and students in IPAS learning. The results of the observation show that learning tends to be centered on textbooks and minimal use of concrete media.

2.2. Preparation

After the observations were made, the author organized the preparation stage of the activity. This preparation includes designing learning tools based on a contextual approach that is tailored to the characteristics of students. These devices include teaching modules, teaching materials, learner worksheets, assessment rubrics, and teacher and student reflection guides.

2.3. Implementation

In the implementation stage, the service activities were carried out directly by the authors through teaching practice in the classroom. After the observation, students were

directed to conduct discussions in small groups to discuss their findings. The authors then facilitated a whole-class discussion to strengthen the understanding of relevant IPAS concepts. As a follow-up, students were given the task of creating a mini-project that was a representation of their learning outcomes. These mini projects were in the form of waste sorting posters for phase A, dioramas of the school landscape for phase B, and embossed maps of the school flora and fauna for phase C.

2.4. Evaluation

The evaluation stage is carried out by assessing the process and results of the activity. Process assessment includes observation of students' active participation during the activity, as well as the implementation of reflection on the learning experience that has been passed. Meanwhile, the evaluation of the results is carried out on students' mini project products using an assessment rubric.

3. Results and Discussion

3.1 Result

Table 1. Pre Test Results

Class	Number of students	Range Pretest Score	Average Score	Percentage Completed (KKM 70)
Class 2B (Fase A)	19	45-70	58	26% (5 students)
Class 3A (Fase B)	18	50-75	62	33% (6 students)
Class 5A (Fase C)	26	55-78	65	38% (8 students)

Based on the results of the Pre Test conducted before student learning related to each material, grade 2 students with material on types of waste, grade 3 students with material on landscapes, and grade 5 students with material on the distribution of flora and fauna, it can be seen from these questions that students only answer randomly. Grade 2 students answered that the types of waste are snack wrappers and drink bottles. The majority of students do not understand well the different types of waste, how to sort, and the benefits of disposing of waste in its place. Students tend to be confused in classifying organic and inorganic waste. Meanwhile, in grade 3 students related to landscapes, students have been able to mention examples of landscapes but students have not been able to relate their understanding to community activities. In grade 5 students are able to mention examples of flora and fauna but only at a basic level, students do not know how to distribute and how to preserve flora and fauna.

Table 2. Post Test Results

Class	Number of students	Range Pretest Score	Average Score	percentage completion (KKM 70)
Class 2B (Fase A)	19	75-90	82	95% (18 students)
Class 3A (Fase B)	18	80-92	85	100 % (18 students)
Class 5A (Fase C)	26	82-95	88	100% (26 students)

Based on the results of the Post Test conducted at the end of the learning process through evaluation questions, it shows that there is an increase in students' understanding of the material taught in each phase. Grade 2 students (Phase A) showed a better understanding of the classification of waste and the habit of maintaining cleanliness

with a percentage of completeness of 95%. Increased understanding is shown by students' ability to dispose and sort waste in their daily activities. While in grade 3 and grade 5 students showed a 100% percentage of completeness, this increase was based on students' ability to identify landforms. Students can explain that lowlands are used for agriculture, and beaches for tourism or fisheries. As for phase C, students showed a deep understanding of the distribution of flora and fauna. They are able to give examples of flora and fauna according to the region, and explain the importance of maintaining biodiversity.

3.2 Discussion

Effectiveness of Contextual Learning

The application of contextualized learning to Indonesian language materials in Primary School phase A and IPAS materials phase B and C showed significant improvement in students' competencies. This approach connects academic concepts with real-life experiences that students have on a daily basis, especially related to the types of waste, landscapes, and the distribution of flora and fauna in their surrounding environment. With contextual learning, learning becomes more relevant and meaningful so that students not only memorize material, but are also able to understand and apply knowledge in the context of real life (Yolanda, et al 2024). Evaluation data obtained through pre and post tests showed an increase in average scores in all phases, which proved the effectiveness of this learning method in strengthening the understanding of the IPAS concept.

In addition to cognitive aspects, contextual learning also plays a role in fostering students' environmental awareness and caring attitude towards nature preservation. Students become more sensitive to environmental issues such as waste management and the importance of maintaining biodiversity, which are essential parts of IPAS education. This finding is in line with research by Zulfayati (2024) and Adenan et al. (2023) which confirmed that contextual learning can significantly improve learning outcomes and student motivation.

Reflections on Activities and Materials in Learning Activities

Reflections from teachers and students on the learning process show that the material delivered through the contextual approach is easier to accept and makes students more active in the learning process. Students also feel motivated because the learning materials are directly related to their lives, such as waste management and understanding the surrounding natural environment. To support the sustainability of the learning outcomes, it is recommended to develop a comprehensive contextual-based learning module and provide training to teachers to effectively implement this method. Collaboration with the community and surrounding environment also needs to be improved so that learning does not only occur in the classroom, but also in the real environment of students (Rismayani, 2023; Palantika et al., 2023).

Follow-up Plan

To maintain sustainability and expand the positive impact of this learning, some follow-up actions are recommended which include the development of a more comprehensive contextual-based learning module and intensive training for teachers to be able to implement this method effectively. In addition, collaboration between the school and the surrounding community and environment needs to be improved so that learning does not only take place in the classroom, but also outside the classroom through real activities such as field trips and environmental projects. This approach is expected to strengthen students' understanding while fostering a responsible attitude towards environmental conservation (Ginting et al., 2023; Palantika et al., 2023). With these steps, strengthening IPAS competencies through contextual learning can be more optimal and sustainable.

4. Conclusion

The conclusion of this service research shows that the application of contextual

learning in Indonesian and IPAS materials on types of waste, landforms, and the distribution of flora and fauna in phase A, B, and C elementary schools significantly improves students' concept understanding, critical thinking skills, and environmental awareness. Through a learning approach that is relevant to everyday life, students become more active, motivated, and able to connect the material with real experiences around them.

Based on these findings, it is recommended that schools and teachers continuously develop contextual-based learning methods by utilizing the environment as a learning resource, conducting training for teachers to improve their understanding and implementation skills of this method, and encouraging collaboration between schools, families, and communities to support more meaningful and sustainable learning.

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