

Social Emotional Learning (SEL) in Science Subjects to Improve Elementary School Students' Well-Being

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ABSTRACT

This study aims to describe the implementation of Social Emotional Learning (SEL) in Natural and Social Sciences (IPAS) subjects and its impact on improving the well-being of elementary school students. The study used a descriptive qualitative method with data collection techniques through observation, interviews, and documentation of teachers and fifth grade students at SD Muhammadiyah 29 Surabaya. The results showed that the IPAS subject provides a wide space for the integration of social emotional values, such as empathy, responsibility, cooperation, and communication skills. Teachers insert these values contextually through group discussions, experiments, and learning reflections. The integration of SEL in IPAS has been proven to increase student participation, build healthy social relationships, and foster self-confidence and emotional comfort during learning. Thus, SEL in IPAS contributes significantly to strengthening students' well-being academically and emotionally.

Keywords: Social emotional learning, science, well-being, elementary school

1 Introduction

Education is an important thing in the continuity of human life. Education is not only a place to transfer knowledge, but education includes the development of students in various aspects. The development of elementary school-aged children is not only focused on cognitive aspects, but also on social and emotional aspects that shape character and long-term well-being. One of them is the development of students in their social and emotional aspects. For students at the elementary school level, of course, they still need guidance to develop their social and emotional skills. Students' social and emotional skills are one of the six skills that children must develop and these skills are also an initial step for students to interact with their environment. The form of these skills can be in the form of social emotional learning in elementary school learning. Social emotional learning refers to a person's ability to understand and manage their emotions, and establish positive relationships with others. In children, social emotional skills play an important role in forming positive attitudes, increasing self-confidence, and helping them navigate the social environment at school and at home.

Learning that only focuses on academics becomes inadequate without reinforcement from the social-emotional aspect that supports psychological recovery and improving overall well-being [1]. The development of elementary school-aged children is not only focused on cognitive aspects, but also involves social and emotional aspects that shape character and long-term well-being. [2] stated that students' well-being has a direct impact on their academic achievement and involvement in school activities. Therefore, education that is oriented towards the formation of a whole person who is able to understand themselves, build positive relationships, and face life's challenges is increasingly relevant to be implemented early on. One approach that has been proven effective in improving student well-being is social emotional learning (SEL).

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2 Literature Review

Social emotional learning (SEL) is a learning activity that helps children develop the social and emotional skills needed for success in their lives [3]. Social emotional learning (SEL) has emerged as a strategic approach to supporting students' emotional and social development. SEL aims to equip students with skills such as self-awareness, emotional management, empathy, and the ability to build healthy relationships. Research by [4] shows that implementing SEL programs in elementary schools can improve students' emotional awareness, social skills, and ability to manage academic stress. However, challenges such as limited teacher understanding and lack of integration into the curriculum are still obstacles to the effective implementation of SEL.

SEL includes five core competencies, namely self-awareness (this ability helps students understand their strengths, emotions, weaknesses, and interests), self-management (strategies for managing one's own emotions through increased awareness gained through relaxation techniques and those gained by dealing with anticipation of anxiety and stress), social awareness (the ability to teach all students that they are aware that they maintain social relationships through good behavior and communication), social concern (competence that encourages the development of empathy and a sense of caring from each student in carrying out their role as social beings), and responsible decision-making (students are taught skills in making the right decisions and are full of universal virtue values) [5]. [6] stated that the integration of local values with SEL theory can improve students' emotional control, empathy, and conflict resolution skills without violence. This emphasizes the importance of a contextual approach in implementing SEL that is in accordance with local culture and values. The integration of local wisdom values in SEL learning also shows potential in preventing negative behaviors such as bullying.

SEL not only equips students with academic skills, but also develops their capacity to manage emotions, build positive relationships, and make ethical and responsible decisions [5]. When SEL is implemented in an integrated manner in subjects, including Natural and Social Sciences (IPAS), students can relate knowledge to their emotional and social experiences more meaningfully. The IPAS subject at the elementary school level not only functions as a means of building conceptual knowledge about nature and society, but also as a place to instill the values of collaboration, care, and empathy. This is in line with the characteristics of SEL which include five elements [6]. Social emotional development is the development of behavior that is in accordance with social demands, emotional development is the process of children practicing existing social stimuli, especially those obtained from group demands, as well as behaving and learning to socialize [3].

Integrating these values into science learning has the potential to increase students' active participation, strengthen group collaboration, and create a classroom climate that supports their psychosocial well-being. Various studies have shown that the application of SEL in subject-based learning can encourage increased student well-being, including in the academic, social, and emotional domains [7]. Students who feel emotionally and socially supported in the classroom environment will have better resilience in facing learning challenges. In this context, science learning integrated with SEL principles has great potential to create a safe, inclusive, and emotionally healthy learning atmosphere for elementary school students. [8] stated that when teachers carry out emotional management and SEL-based learning design with a differentiated learning approach, it can improve teachers' understanding and skills in supporting students' social and emotional development.

3 Research Methods

The research method used in this study uses a qualitative research method. In this study, data on increasing students' learning focus on science learning was obtained through observation and interviews. There are two variables in this study, namely the dependent variable and the independent variable. The dependent variable is the focus of student learning, while the independent variable is the implementation of SEL in science learning. The study was conducted at SD Muhammadiyah 29 Surabaya with research subjects being 25 fifth grade students. The research instruments used were in the form of giving interviews and observations conducted directly by the teacher.

4 Result and Discussion

1. The Role of Science Learning

The results of the study show that the subject of science in elementary schools plays an important role not only in developing conceptual knowledge, but also in shaping the character, attitudes, and social skills of students. Based on the results of observations and interviews with teachers and fifth grade students at SD Muhammadiyah 29 Surabaya, science learning provides a wide space for interaction, discussion, observation, and experimentation collaboratively. These activities have been shown to foster curiosity, responsibility, and cooperation among students. Teachers stated that science material is often directly related to students' daily lives, such as the theme of the environment, the human body, weather, and social society. When students discuss these topics, they not only learn facts, but also practice expressing opinions, listening to others, and solving problems together in groups. This condition greatly supports the strengthening of social emotional skills, especially in terms of social awareness and relationship skills. As stated by Agustina et al. (2025), contextual learning such as science is an effective medium for fostering empathy, collaboration, and a sense of responsibility in students from an early age. In addition, science learning also contributes to the development of students' well-being by creating an active and enjoyable learning atmosphere. When students are directly involved in experiments, nature observations, or social case studies, they feel more motivated and appreciated. This has a positive impact on their psychological well-being at school. Active involvement of students in the learning process is an important indicator of well-being because it reflects the connectedness, autonomy, and competence felt by students.

2. Social Emotional Learning (SEL)

The findings from observations and interviews indicate that most teachers understand the importance of social emotional learning (SEL) as part of the holistic education process in elementary schools. Teachers view SEL as helping students recognize and manage their emotions, build healthy social relationships, and make positive decisions. In practice, the implementation of SEL is still implicit and depends on the teacher's initiative in managing the classroom atmosphere. As expressed by a grade V teacher, "Sometimes we SEL values such as mutual respect during group work or class discussions, but not in a structured way like special lessons." This shows that teachers' understanding already exists, but has not been followed by systematic integration. According to [6], effective SEL should be implemented explicitly through routine activities in the classroom and integrated into core subjects. Previous research also confirms that the implementation of SEL can improve a positive classroom climate, reduce interpersonal conflict, and encourage student engagement in the learning process [9]. In this context, strengthening teachers' capacity in implementing SEL is very important so that learning does not only focus on academic achievement, but also on the development of students' sustainable life skills.

3. Implementation of SEL in Science Learning

The integration of Social Emotional Learning in the subject of Science shows significant results in increasing student engagement and strengthening their well-being. The following is the observation data.

From the observation results, the integration of SEL in Science and Natural Sciences can be seen through group discussion activities, joint experiments, and post-learning reflections. These activities strengthen several core competencies of SEL, such as self-awareness, social awareness, and responsible decision-making. This learning also creates a more supportive, inclusive classroom climate and encourages students' self-confidence, which ultimately has a direct impact on their well-being at school [5]. Based on the results of documentation and interviews, it was found that teachers integrated SEL values when discussing materials such as the environment, weather changes, or social relationships. For example, when discussing the topic of natural disasters, students are encouraged to discuss empathy for victims and how to provide assistance. One teacher said that Science and Natural Sciences learning is often a means to foster students' social awareness. "Children become aware of how to protect the environment, but also learn to work together and help each other," said one teacher. This is in line with the study of [10] which states that thematic and contextual learning, such as Science and Natural Sciences, allows for more natural and meaningful SEL integration.

Tabel 10. Results of SEL Observations in Science Learning

Observed Aspects	Observation Indicators	Observation Findings
Class atmosphere	Students appear active and comfortable during SEL learning	Most students are actively involved in discussions and group work; the classroom atmosphere is conducive
Student social interaction	Work together, help each other	There was positive collaboration in group assignments and experiments
Integration of SEL values by teachers	Teachers insert the values of empathy, responsibility, and communication into SEL learning	The teacher asks reflective questions about students' feelings and the social impact of the material being studied
Students' emotional responses to learning	Students are enthusiastic, able to express their opinions, and listen to the opinions of others	Students look happy, confident during group presentations, and respect their friends' opinions

5 Conclusion

Science learning plays an important role as a means of character building, strengthening social values, and developing students' collaborative skills. Science material that is contextual and directly related to everyday life provides a great opportunity to instill social emotional values through discussions, group practices, and reflective activities. Teachers naturally insert the values of empathy, responsibility, and communication during the learning process, especially in group discussions and collaboration activities. The integration of SEL in Science learning has proven effective in supporting the improvement of students' well-being. Students show high enthusiasm for learning, better social interaction skills, and increased self-confidence and concern for their social environment. This shows that SEL can be implemented organically in Science to strengthen students' overall emotional and social well-being.

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