

EXPLORING THE INTEGRATION OF CLIMATE CHANGE EDUCATION: TEACHERS' PERSPECTIVES FROM P5 PROJECTS AND ENGLISH LESSONS IN SECONDARY SCHOOL

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Abstract: The integration of climate change education is the primary focus of initiatives to raise student awareness and knowledge about climate change in many nations, including Indonesia. The integration of climate change education in Palembang secondary schools is the subject of this study, which focuses on the opinions of English teachers who are teaching English classes and participating in the P5 project (Pancasila Student Profile Strengthening Project). The purpose of this study is to determine how much climate change education is included in these projects and lessons, as well as how comfortable and eager the teachers are to use these ideas in their instruction. The design of the research is qualitative research design. The study employed theme analysis and semi-structured interviews with four English teachers to investigate the opportunities and problems of integrating climate change education. Despite the P5 project initiative, the results show a gap in the complete integration of climate change into English education. The necessity of formal training and resources to properly teach climate change was acknowledged by teachers, underscoring the significance of resolving these issues for the successful adoption of climate change teaching in secondary schools.

Keywords: *Climate Change, Climate Change Education, Independent Curriculum, P5 Project*

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INTRODUCTION

Climate change is a global challenge that urgently needs to be addressed by the international community. An important worldwide catastrophe that is drastically altering life on Earth is climate change. Significant environmental harm is caused by climate change, and if emissions are not reduced, future generations' means of subsistence will be destroyed (Powell, 2017). The impacts of climate change have been felt widely, from rising global temperatures to increasingly frequent natural disasters. In considering the pressing need to combat climate change, education is essential in equipping the next generation to take on this task. The integration of climate change education is the primary focus of initiatives to raise student awareness

and knowledge about climate change in many nations, including Indonesia. One approach taken is through school synchronization. One effort to bring and include climate change problems into the curriculum is the P5 (Pancasila Student Profile Strengthening Project). Curriculum reconceptualization and ecopedagogy-based professional development are examples of the school community's willingness to adapt (Silvhiany et al., 2023; Putri & Silvhiany, 2022)). The goal of the Merdeka Curriculum's Strengthening Pancasila Student Profile Project is to make students more conscious of the ideals included in Pancasila and to help them incorporate these values into their everyday lives (Hamidah, 2022; Nurasiah et al., 2022). However, the implementation of educational climate change in the school curriculum does not always run smoothly. There are a lot of obstacles in front of us, including the current climate as well as outside variables like scarce resources and a lack of knowledge about the complexities of climate change issues. Despite efforts to incorporate educational climate change into the curriculum in Indonesian schools, there are still a number of barriers to its adoption. One of them is the lack of adequate training and understanding among teachers regarding the issue of climate change and how to teach it effectively. The creation of instructional tools to facilitate the integration of ecological and climate change topics in junior high school English language instruction, however, continues to receive little attention despite this growing interest (Maskana et al., 2024). UNESCO (2021) advocates the inclusion of climate change in school curricula by 2025, highlighting the importance of education in empowering people to combat climate change via the acquisition of requisite information and skills. However, only 19% of schooling covers climate change, suggesting that more has to be done to raise environmental awareness, particularly in Indonesia. The Ministry of Education and Culture of Indonesia intends to include lessons on climate change in science, math, and English courses. This strategy supports the more comprehensive view of climate change as long-term, major changes in weather patterns that affect the makeup of species and vegetation worldwide. It also emphasizes the significance of climate change education in producing aware and engaged global citizens. Apart from that, there are also obstacles related to inadequate educational infrastructure in several regions, which makes curriculum implementation uneven throughout the country. To address this issue, though, the P5 project and other initiatives to include climate change teaching into school curricula are crucial first steps. It is envisaged that climate change education (CCE) may become a crucial component of the educational system and better prepare future generations to deal with the difficulties of climate change with strong commitment from the government, schools, teachers, and society. Secondary schools, as educational institutions that have a central role in shaping students' attitudes and knowledge, play an important role in implementing educational climate change. The curricular engagements implemented in a preservice teacher course have shown the possibilities of integrating socioscientific issue of climate change into a language education curriculum (Silvhiany et al., 2024). CCE promotes environmental literacy and responsibility by providing people with the information and abilities necessary to make sustainable decisions and take informed action (Hung, 2022). It seeks to raise students' awareness of climate change, support their adaptation, and provide them the tools they need to live sustainable lives. However, to achieve effective integration, the role of teachers is also very crucial. It is the duty of educators to help students comprehend the complexities of climate change and the actions necessary for

adaptation and mitigation. Meanwhile, English has an increasingly important role in the context of globalization. Students who want to participate in international conversations about climate change and cross-cultural cooperation need to have these language proficiency skills. As a result, it becomes highly pertinent to look at climate change education from the perspective of teachers working on P5 projects and teaching English in secondary schools. In-depth conversations with teachers about how are the Integration of Climate Change in P5 Project, Integration of Climate Change in English Lesson, Teacher Familiarity and Willingness. Therefore, this study aims to bridge this gap by examining the teachers' perception of P5 project and English lesson in secondary school.

A crucial component of the international response to climate change is education. Education about climate change enables youth to recognize and respond to the effects of global warming. In addition, it promotes behavioral and attitude modifications and aids in their adaptation to trends associated with climate change (Karami et al., 2017). Since 2014, Nepalese schools have included climate change education into their curricula across a number of courses, educating pupils about the issue (Ministry of Science, Technology and Environment, 2015). One important tactic to combat climate change is climate change education (CCE), which gives people the knowledge and skills they need to make sustainable decisions and take informed action in their communities and as individuals. The knowledge and comprehension of climate change science, its effects, and the necessity of mitigation and adaptation strategies are provided by CCE. It develops environmental literacy, instills a feeling of environmental responsibility, and gives people the tools they need to critically analyze and evaluate information about climate change (Hung, 2022). Through efforts for informal education and integration into formal education systems like schools and universities, CCE offers possibilities for transformative learning experiences that spur action and behavioral changes. The primary objectives of climate change education are to: 1) increase knowledge of the causes and effects of climate change; 2) equip students to adapt to its effects; and 3) give them the power to take appropriate action to lead more sustainable lifestyles (mitigation). Because of the intricate, unique physical, social, and cultural aspects of climate change, education about it requires special pedagogical thought (Eilam, 2022). CEE aims to motivate group action and create a more sustainable future for future generations by incorporating climate change themes into official education curricula, informal learning platforms, and community engagement initiatives. Chang and Pascua (2017) discovered that in order to advance climate change education, it was critical to enhance educators' and teachers' abilities to impart correct knowledge, incorporate locally relevant content, and encourage critical thinking about and action on climate change adaptation and mitigation. This involved giving them educational support, assisting in the development of necessary skills, and broadening their comprehension of climate and sustainability issues. In order to help students, gain a greater understanding of this important global issue and investigate strategies for promoting sustainability and environmental stewardship, climate change can be incorporated into the Independent Curriculum.

The role of the Indonesian government in 21st-century education cannot be overstated. The curriculum has changed as one of the many actions taken by the Indonesian government to address the issues that would face the country's educational system in the twenty-first century. The Merdeka Curriculum, which is

being used, places a strong emphasis on the skills and knowledge required to meet the problems of the twenty-first century, including problem-solving, teamwork, creativity, communication, and information technology proficiency. The government has prioritized innovation in education by implementing programs that include technology and emphasize high-quality learning by outlining the necessary skills. By outlining the competencies that students ought to possess, educators can help students develop into self-sufficient learners while also fulfilling their facilitation role. As a teacher, you should provide difficulties that allow pupils to apply their talents and innovate in order to advance (Ahmed et al., 2021). The goal of Indonesia's educational reforms, known as the Merdeka Curriculum, is to equip students—the country's future—to take on the problems of the twenty-first century. Along with adopting the Merdeka Curriculum, the government of Indonesia created a new initiative called the Pancasila Student Profile Strengthening Project (P5) in an effort to raise the standard of education in the country. The Pancasila Student Profile Strengthening Project (P5), according to Kemdikbud (2022), is cross-disciplinary learning in which participants observe and consider solutions to issues in their immediate surroundings in order to enhance specific competences in the Pancasila Student Profile. It is hoped that by enhancing the capacity of skilled human resources and realizing a society with strong character based on Pancasila ideology, Pancasila, the State Ideology, can become a new strategy in answering challenges and as a unique solution to problems that occur in Indonesia through the Pancasila student profile (Masitoh & Nursalim, 2023). As a component of the Merdeka Belajar Curriculum, the Pancasila Learner Profile (PPP) outlines the competencies that the Indonesian educational system seeks to develop in students with integrity (Aisyah & Nawawi, 2023). The P5 Project and the Merdeka Curriculum are complimentary and closely related. Students are urged by the P5 Project to comprehend Pancasila values like Gotong Royong, People's Sovereignty, and Democracy and to act and think accordingly. This is exactly in keeping with the goals of the Merdeka Curriculum, which is to develop students who embody Pancasila and can live by these principles. Mover Schools may be significantly impacted by the Independent Curriculum's Strengthening the Pancasila Learner Profile (P5) effort. With the P5 in place at Sekolah Penggerak, students will have a deeper understanding of Pancasila's core principles and be able to forge solid moral foundations around them. Through the development of pupils with Pancasila, the Mobilization School program aims to accomplish the goal of Indonesian education, which is to learn an evolved Indonesia that is sovereign, autonomous, and has a personality (Syafi'i, 2021). When it comes to character education for the Pancasila student profile, mobilization schools can serve as role models for other educational institutions. The Pancasila student profile highlights a range of values, including faith, piety, independence, mutual cooperation, global service, critical thinking, and creativity. (Mariana, 2021). Beyond the boundaries of schools, society can benefit from the integration of the Strengthening the Pancasila Learner Profile (P5) project into the Independent Curriculum. The Mobilizing School can aid in the creation of a more tolerant, just, and peaceful society by imparting Pancasila values in its pupils. This can be accomplished by volunteering and taking part in community service initiatives that uphold Pancasila principles like gotong royong, independence, and global service. Sekolah Penggerak can contribute significantly to Indonesia's future by generating students who are not only knowledgeable but also morally and socially responsible

by incorporating P5 projects into the curriculum.

The teaching of English in schools is crucial for language proficiency and motivation (Frisch, 2017). English Lesson can mean different things depending on context. It could refer to a formal educational session where students learn about the English language, its grammar, vocabulary, and literature. These lessons typically take place in schools or language institutes and are structured to help learners acquire proficiency in English. The content of an English lesson can vary widely, covering topics such as reading comprehension, writing skills, listening exercises, and speaking practice. In a broader sense, English Lesson can also refer to any situation or experience where someone learns or improves their English language skills. This could include informal conversations with native speakers, language exchange programs, online tutorials, or self-study using books and resources. In today's interconnected world, the demand for English proficiency is high, driving individuals from diverse backgrounds to seek out opportunities to enhance their language skills. A lesson's effectiveness in teaching English is contingent upon a number of elements, such as the materials available, the instructor's expertise, the learners' involvement, and the teaching methods used. A well-thought-out lesson plan will include a variety of activities to meet the needs of various learning goals and styles. Interactive exercises, multimedia presentations, group discussions, and individual practice tasks are a few examples of what it might contain. Uncertainty in language and non-standard use are problems in the classroom (Fan, 2020). One prominent challenge is linguistic diversity among students. In a typical English classroom, learners may come from varied linguistic backgrounds, each with unique proficiency levels and language acquisition experiences. Addressing this diversity requires instructors to employ differentiated instruction techniques, providing tailored support to students at different skill levels while fostering an inclusive learning environment where all voices are heard and valued. Cultural differences also present challenges in the English classroom. English is not only a language but also a vehicle for cultural expression, shaped by the unique histories, traditions, and norms of English-speaking countries. Educators must navigate cultural sensitivities and promote intercultural understanding while exposing students to diverse perspectives through literature, media, and discussion.

A better understanding of teachers' perspectives and the lessons that can be learned from their experiences can assist in the development of more effective curricula and better learning strategies in efforts to integrate climate change education in secondary schools. The research questions are as follows:

1. What is the extent of climate change education in the P5 school project?
2. What is the extent of climate change education in English lesson?
3. What is the level of teacher familiarity and willingness with climate change concept in education?

METHODOLOGY

Subjects

The research was conducted at a secondary school in Sumatera Selatan, Palembang. This school was chosen because they actively participate in Project P5, which supports project-based learning and multidisciplinary methods including environmental education. The selection of this school provides an appropriate context for investigating how climate change is integrated into English lessons,

reflecting a diverse educational setting.

Four English teachers took part in the research. All participants had at least five years of teaching experience and were directly involved in teaching English at the secondary level. These teachers were also part of a pilot program at their individual school that incorporated climate change subjects into their curricula. Their opinions are especially relevant since they have practical experience integrating language instruction with environmental education.

Design and Procedures

This study investigates secondary school English teachers' opinions on incorporating climate change education into their curriculum by using a qualitative research methodology, employing theme analysis. This technique was chosen to gain deep insights and subtleties of teachers' perspectives and experiences, which are difficult to quantify. The procedure of this research began with selecting a secondary school in South Sumatra. After that, interviewed several teachers who taught English at the school using the semi-structured interview method. Semi-structured interviews were used to provide greater freedom in answering questions, so that participants could express their ideas more freely and completely.

Data Collection and Data Analysis

Semi-structured interviews were performed remotely, with the sessions facilitated using a digital communication platform such as Zoom. This method maintained the safety and convenience of all participants while retaining the quality of their engagement. Interviews involve asking participants questions to gather rich, detailed information about their experiences and perspectives (Hinton & Ryan, 2019). An interview guide was created, which consisted of open-ended questions aimed at gathering thorough information about the participants' experiences, attitudes, and obstacles in incorporating climate change teaching into their English lectures.

The interviews were performed remotely, with responses gathered in writing. The core data for analysis was based on detailed notes and summaries from each interview. Thematic analysis was used to discover and understand themes and patterns connected to the incorporation of climate change education into English teaching. The written data was used to develop initial codes, which were then grouped into bigger topics and polished iteratively. This method enabled a disciplined and thorough examination of the instructors' viewpoints and experiences. Framework for thematic analysis was used, which gives explicit rules for discovering, interpreting, and reporting themes in qualitative data, resulting in a rigorous analytical procedure.

FINDINGS AND DISCUSSION

The findings of the interview were analyzed using a method known as the thematic analysis. There are 3 parts to answer the research questions; (1) Integration of Climate Change in P5 Project, (2) Integration of Climate Change in English Lesson, (3) Teacher Familiarity and Willingness.

Integration of Climate Change in P5 Project

The P5 initiative is a program designed to encourage students to engage with environmental issues through artistic expression. By transforming plastic waste into art, students not only learn about the importance of recycling and waste management

but also develop their creativity. This hands-on approach fosters a sense of responsibility towards the environment, as students are actively involved in collecting and processing plastic materials.

The interview with the English teachers provides insight into how their school tackles climate change in the classroom, particularly in relation to the P5 project. Teachers discuss the P5 program, which promotes sustainable living and allows children to make art out of plastic waste. This program teaches pupils about garbage management while encouraging creativity and environmental consciousness. Waste management, environmentally beneficial projects, and character-building exercises are among the activities. (Susanti et al., 2023). The teachers claim that even though the P5 project places a lot of attention on climate change, the subject is not included in English classes. Teachers should be aware that the P5 project is the sole way in which climate change is discussed; it is not covered in English classes or on its own. A comes to the conclusion that projects are the only way that climate change is addressed; there are not any particular lessons that focus on it.

"Yes, in our school we have p5 with the topic of climate change which is the theme of sustainable lifestyles, we tell the students to make art from plastic waste. At first, we tell them to collect plastic waste then they will process it into art." (MF)

"It seems that the topic of climate change was introduced only through a project, no specific lessons were given." (A)

According to one teacher, "At first, we tell them to collect plastic waste then they will process it into art." The P5 program's practical stages are emphasized in this statement. Pupils are required to collect plastic debris, which acts as a concrete illustration of the problems pollution poses to the ecosystem. Zero waste initiatives, ecobricks, and waste banks are examples of implementation tactics that have been proved to have a positive impact on decreasing waste volume and fostering students' independence and inventiveness (Zainab Nurazizah et al., 2024). By converting this waste into art, they gain a deeper understanding of the impact of plastic on the environment and the importance of sustainable practices.

An in-depth look at how their school is handling climate change in the classroom—particularly through the P5 initiative—is given in the interview with English instructors. Although creating P5 projects was initially difficult for instructors, support has resulted in the creation of a variety of themed designs, including sustainable lifestyle subjects like "Save Water" and "Love the Environment" (Hartutik et al., 2023). This initiative is one of the school's most notable attempts to encourage students to live sustainably and with awareness of the environment. Teachers clarify that by turning plastic garbage into beautiful creations, the P5 project inspires children to participate creatively. In addition to encouraging creativity, this raises pupils' understanding of environmental sustainability in general and waste management in particular (Hendriyani et al., 2023).

In conclusion, even though the school's P5 initiative uses creative projects involving plastic waste to effectively expose students to the concepts of climate change and sustainable living, it is still the major way that these themes are covered. There are no lessons specifically devoted to climate change education in the larger English curriculum; the integration of such instruction is exclusive to this initiative. This suggests that in order to give pupils a thorough understanding of this important

topic, a more all-encompassing strategy that integrates climate change teaching across a variety of courses is required.

Integration of Climate Change in English Lesson

Numerous genres have explored climate concerns, including children's literature, which frequently deals with environmental challenges. Four teachers were interviewed to learn more about their opinions on incorporating themes related to climate change into English classes. Although they agreed that there are certain themes about climate change in English literature, they all admitted that these subjects are not specifically included in their curricula. This variability indicates that more texts that involve students in narratives about climate change should be included in English textbooks to improve the teaching experience (Tuskes, 2019). This is a notable disconnect between the inclusion of content about climate change in instructional materials and its actual implementation in the classroom.

"We don't have it in the subject for teaching climate change specifically. There are themes related to climate change, but we don't teach it specifically."
(MF)

"In the grade 7 book, there is a theme that maybe relates with climate change, it's 'this is my world'". (R)

Recent studies highlight the importance of addressing climate change in English textbooks. To enhance their English language skills and environmental consciousness, Indonesian secondary school students require more report text resources that address climate change (Tenridinanti et al., 2021). Teachers noticed that themes connected to climate change were frequently found in English texts. One teacher, for instance, cited a particular instance from a textbook for Grade 7 that discusses the concept "This is My World." This title raises the possibility of having a conversation about environmental concerns and individual accountability in relation to climate change. Educators did point out that their class plans and methods did not specifically cover these themes.

Teachers were in agreement that there was no curriculum or subject area dedicated to teaching climate change, even if there were pertinent topics in English literature. According to Mohammadnia and Moghadam (2019), there are activities on topics that can be indirectly related to sustainability (e.g., conversations about going to the zoo, warm-up activities about going camping, reading activities about vacations in the forest, etc.). At the basic level, English books do not have content related to sustainability. Even though these pursuits might not initially seem connected to sustainability, they can establish a framework for discussing certain ideals in an approachable and clear manner. One participant in this study concisely stated, "We don't have a subject to teach climate change specifically. There are some themes related to climate change, but we don't teach it specifically." This statement summarizes the educators' sentiment that while climate change is a pressing global issue, it is still largely unaddressed in their English language teaching.

Teaching English and teaching the principles of sustainable living can go hand in hand. The significance of this comes from the fantastic chance that English language learning programs offer to discuss these topics, increase students' understanding of the difficulties, and assist them in coming up with original solutions

to the contemporary environmental challenges. All of the activities that take place in the English classroom ultimately have meaning because of the teacher and the pupils. There is still a guiding role for the textbook. Some sustainability ideas might never be covered in the classroom if it weren't for the textbook.

Teacher Familiarity and Willingness

In summary, teachers all acknowledge a lack of formal training or deep knowledge about climate change. Many feel unprepared to effectively teach this complex subject. They recognize the importance of climate education but struggle with finding accurate resources and integrating the topic into their existing curriculum. Overall, they agreed on the significance of incorporating climate change education into English lessons despite their varying levels of expertise.

“If you say familiar, yes, I am familiar with climate change, but I have never attended any training related to climate change.” (A)

“A story book that deals with climate change, yes, I will integrate climate change into English lessons because I see changes in the world today with lots of forest fires, etc., so that children know and are more aware of climate change.” (A)

Many believe they are unprepared to instruct this difficult material (Stevenson et al., 2017). Although they understand how important climate education is, they have trouble locating reliable resources and incorporating the subject into their current curricula (Buchanan, 2012). Despite their differing degrees of experience, they all agreed on the importance of including climate change teaching in English classes (Anderson, 2012).

Teachers showed a great dedication to addressing these challenges in spite of these difficulties. In an effort to create a more comprehensive curriculum on climate change, many are actively looking for professional development opportunities and working with colleagues on it. In order to improve their instructional materials and increase student accessibility and engagement, they are also utilizing digital resources and community partnerships (Monroe et al., 2019). This proactive strategy demonstrates how committed educators are to providing the future generation with the information and abilities needed to confront climate change.

In conclusion, even though incorporating climate change education into English language teaching in secondary schools presents many obstacles, teachers' commitment and ingenuity are clear. Educational institutions can better assist teachers in this vital task by giving them the necessary resources and training. In addition to enhancing English instruction, this integration gives students the tools they need to address climate change as informed and engaged citizens.

CONCLUSION AND SUGGESTION

The study highlights the urgent need for improved professional development and teacher preparation in climate change education. English teachers lack familiarity with climate change issues, indicating a necessity for extensive training programs. There is a gap in the syllabus regarding climate change content in English classes, presenting an opportunity for structured inclusion in the curriculum. Providing accurate teaching materials and access to up-to-date digital resources is crucial to

maintaining student interest and comprehension. The study highlights the significance of providing educators with the necessary tools and resources to effectively address climate change in the classroom. Additionally, the researchers recommend creating extensive training programs for English teachers to improve their comprehension of climate change issues and pedagogical approaches for instructing these subjects.

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