One Hand One Plant: Integrating Climate Change Awareness into Education at PGRI Delta University

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Abstract: *Climate change constitutes one of the most significant global challenges, necessitating immediate action and heightened awareness. In response to this, PGRI Delta University launched the "One Hand One Plant" initiative in 2021 as a facet of its dedication to incorporating environmental awareness within the educational framework. This program advocates for the engagement of students, faculty, and staff in the cultivation and care of a tree or plant, thereby fostering a shared sense of responsibility towards sustainability. The initiative aspires to mitigate the campus's carbon footprint, advance eco-friendly living practices, and inform the university populace about principles of environmental stewardship through real action. This article examines the implementation and the outcomes of the "One Hand One Plant" initiative, illustrating how minor actions can culminate in significant environmental consequences.*

Key Words*:* one hand one plant; climate change awareness, PGRI Delta University

Introduction

The assessment of environmental education initiatives within Indonesia has yielded some promising outcomes; however, there remains a necessity for further efforts in cultivating a society that prioritizes environmental sustainability. Indonesia has achieved notable advancements in fostering environmental literacy, as demonstrated by various indicators including waste management strategies, community engagement, university participation, and technological advancements. To optimize these results, it is imperative to address certain challenges such as limited resources and the execution of policies.

Firstly, higher education institutions play an essential role in fostering a comprehensive understanding of environmental issues. Advanced environmental studies programs provide a robust scientific foundation and an in-depth awareness of global challenges such as biodiversity loss, climate change, and the management of natural resources. Furthermore, universities act as centers for international collaboration and research, facilitating the exchange of ideas and solutions addressing environmental challenges. The integration of continuous scientific and technological methodologies into university curricula is vital for preparing the forthcoming generation of environmental advocates.

Secondly, enacting meaningful transformation necessitates active participation from the community. Communities can engage directly in initiatives aimed at environmental conservation through extension programs, awareness campaigns, and participation in ecological activities. An environment that is clean, green, and sustainable is fostered through

heightened awareness generated by local educational programs. The involvement of communities in environmental efforts has a favorable impact on both public and private sectors, thereby encouraging the widespread adoption of sustainable policies and practices Prayogo, W. Et al. (2024).

There exist significant distinctions between the practices of environmental education at the tertiary level in Indonesia and those implemented at the elementary, junior high, and senior high school levels. Primarily, primary and secondary education prioritizes a foundational understanding of ecosystems, life cycles, and the role of human activity in promoting environmental sustainability. Conversely, university-level environmental education engages in a more profound exploration of intricate topics such as climate change, sustainability, and natural resource management, alongside the application of scientific principles. Moreover, the instructional methodologies employed differ markedly. To facilitate experiential learning, primary and secondary education often incorporates interactive techniques, project-based assignments, and field excursions.

In stark contrast, the pedagogical approach at the university level predominantly emphasizes the cultivation of analytical, problem-solving, and critical thinking competencies. Elevated levels of scientific and analytical acumen are requisite for the independent research, discussions, and projects undertaken by university students. Furthermore, both research and academic contributions are pivotal components of environmental education at the university level. Students are anticipated to engage in scientific inquiry, produce scholarly publications, and actively participate in addressing environmental challenges. Universities place considerable importance on professionalism and career orientation.

Environmental courses equip students with specialized knowledge and comprehensive insights to meet the exigencies of diverse environmental professions. Engagement in practical, real-world projects is also indispensable at the university level. Students partake in applied initiatives such as conservation projects, field studies, and the formulation of environmental policies. This approach aims to provide students with practical experience while bridging theoretical knowledge and practical application, thereby fostering a holistic understanding of environmental science and empowering them to address real-world challenges. Consequently, environmental education at Indonesian universities establishes a robust foundation for students to evolve into leaders and practitioners in the field (Hidayati et al., 2020).

Climate change issue constitutes one of the most urgent challenges confronting humanity, thereby necessitating collaborative efforts to alleviate its repercussions. Educational institutions, notably universities, possess a distinctive capacity to tackle this predicament by cultivating awareness and promoting behavioral modifications among lecturers and students. PGRI Delta University, situated in Sidoarjo, Indonesia, acknowledged the imperative to engage in environmental preservation and incorporate sustainable methodologies into campus operations. In the year 2021, the PGRI Delta University inaugurated the "One Hand One Plant" initiative, which underscores the significance of individual contributions in the fight against climate change by motivating all of the university members to plant and care for a tree or plant. This initiative was well welcome by the

members and all had the same spirit to succeed the One Hand One Plant program which officially started at November 5th 2021 and the continuous planting by the rest of members during November. This study aims at exploring the implementation and the outcomes of One Hand One Plant initiative in PGRI Delta University.

Method

The investigation utilizes a qualitative methodology especially case study to assess the execution and ramifications of the One Hand One Plant initiative at PGRI Delta University. This methodology facilitates a nuanced comprehension of the manner in which the initiative incorporates climate change consciousness into educational frameworks and its wider significance for environmental stewardship. The subjects of the study were university members who were involved in the activities.

The data collection techniques of the study consisted of observation, documentation, and semi-structured interviews. Documentation of policy briefs from the university, project frameworks, reports of events, and guidelines for participants involved in the initiative, were meticulously examined to comprehend its objectives, implementations, and alignment with institutional aims. YouTube as a media where the activity documented was also analyzed to see clearly what happened in 2021. The semi-structured interviews were conducted to find university members' opinion towards the program. How they got involved in and how their commitment toward the climate change through planting program. One Head One Plant had systematic activities starting from Small Group Discussion, official meeting, socialization through seminar, classroom coordination, execution (planting day) and one month full for the following planting activities, and plants care. The annual big activity was continuously done in the next year of 2022 and 2023. Those activities were observed thoroughly to see hoe the program ran as planned.

The data then were analyzed based on its purposes of the study. The data from observation, documentation, and semi-structures interviews were categorized as the implementation and the outcomes of One Hand One Plant initiative in PGRI Delta University.

Results and Discussion

The study aims at describing the implementation and the outcomes of One Hand One Plant initiative. The results show that in the implementation, there are three steps consisting awareness campaign, planting activities, and monitoring and maintenance while the outcomes resulted environmental impact and educational benefits. The challenges as the inseparable part of a program are also discussed in this section as the reflection.

The Implementation

The implementation consisted of three steps; Awareness Campaign, Planting Activities, and Monitoring and Maintenance. In awareness campaign, a comprehensive awareness campaign throughout the campus, FGD, seminars, and social media initiatives were executed to educate students, faculty, and staff regarding climate change and the critical significance of reforestation. All lecturers socialized the idea in the classrooms,

accommodated students' opinion, and organized the job and responsibility of the class members. Who brought seeds, plants, flowers, pots, soils, and the tools for planting? The central committee designed the spots for planting for each class so they knew their part.

In Planting Activities, each participant was urged to cultivate one tree or a small plant, either on the campus premises or at their own domicile. Emphasis was placed on native and drought-resistant species to ensure ecological suitability and minimize maintenance requirements. Planting events were coordinated in partnership with local environmental organizations to amplify community engagement. In this case UPT Perbenihan dan Tanaman Hutan Dinas Kehutanan Jawa Timur. On the planting day, the activities began with a group exercise session. There is a weekly program called *"Jumat Berkesan"* (Memorable Friday), which stands for Clean, Creative, and Actionable Friday—a special day for the academic community to engage in non-academic activities. This day was utilized for the first planting session, involving university leaders, lecturers, and the Student Executive Board. On November 5th 2021, rectors, vice rectors, lecturers and Student Executive Board as the first planting round followed by all university members on the days after. The full report was uploaded on YouTube outube.com/watch?v=hK_0EysRoy0.

Figure 1. Planting trees by Rector

Monitoring and Maintenance as the last cycle is to ensure the sustainability of the planting initiative, each class is assigned the responsibility of maintaining their designated plots to prevent the plants from drying out, wilting, or dying. Collaboration with the Office Boys is also arranged, especially during holidays. The greenery of the campus has inspired both lecturers and students to add new plants around their offices or classrooms. A significant milestone following the program was the creation of a vibrant garden at the campus entrance, which has become an iconic feature and a popular spot for selfies. For sustainability, in 2022, planted another 1000 plants in the left space. In 2023, *Taman Mantap* was made in front yard.

The Outcomes

The "One Hand One Plant" initiative has produced substantial outcomes regarding Environmental Impact and Educational Benefits. Environmental Impact Since its establishment, the program has facilitated the cultivation of over 1,000 trees and plants. This initiative has led to a green view around buildings. As university motto "Small but Beautiful",

this program supports the motto happened. Trees were planted at back yard near futsal field. The trees are mango, guava, orange, and starfruit. While flowers arranged from flowery and green leaves.

Another outcome is Educational Benefits. Not stated in curriculum document, One Hand One Plant promotes hidden curriculum of climate change awareness among university members. One of hidden curriculum developed in PGRI Delta University is green campus. The program effectively incorporated environmental education into the academic framework of the university, thereby promoting interdisciplinary research focused on climate change phenomena. Students engaged in comprehensive investigations concerning arboreal growth dynamics, rates of carbon sequestration, and ecological ramifications, thereby enriching their scholarly pursuits and equipping them with the necessary skills to tackle pressing environmental issues.

Otherwise, the One Hand One Hand initiative still has its challenges. Notwithstanding its accomplishments, the initiative encountered several obstacles, including the constraints of limited planting space on campus and variable levels of participant engagement. The resolution of these challenges necessitated the implementation of innovative strategies, including collaborations with neighboring communities to enhance planting opportunities and ongoing initiatives aimed at sustaining participant motivation.

Conclusion

PGRI Delta University's "One Hand One Plant" campaign is an example of how little, doable changes may have a big impact on reducing global issues like climate change. Environmental Impact and Educational Benefits are covered in the result of One Hand One Plant, which was implemented in three stages: Awareness Campaign, Planting Activities, and Monitoring and Maintenance. The study makes recommendations for internal requirements rather than follow-up research. This recommends that the program be maintained with improved measurement and strict documentation to ensure that the university's commitment to raising awareness of climate change is evident and accomplished.

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