KnE Social Sciences

The 6th International Conference on Technology, Education, and Social Science: Education and Social Science

KNE Publishing

Research Article

Education for Sustainable Development: A Case Study of the Lack of Understanding and Practice Among Indonesian Communities

Salsabila Diva Nada Asmarani and Haryo Kusumo Aji*

Communication Sciences, Faculty of Social and Political Sciences, Slamet Riyadi University, Indonesia

ORCID

Haryo Kusumo Aji: https://orcid.org/0009-0003-3657-0988

Abstract.

Education for sustainable development (ESD) is an educational approach designed to equip individuals with the knowledge, skills, and values needed to address global challenges such as climate change, resource depletion, and inequality. This study examines the understanding and practice of ESD in Indonesia, analyzing factors that influence its implementation. The findings reveal that while 60% of respondents have heard of ESD, only 37% rate it as highly important in education. Furthermore, 64% of institutions implement ESD, but significant barriers remain, including lack of knowledge (80%) and limited institutional support. These results highlight the need for stronger integration of ESD into educational curricula and policy frameworks. The study suggests that increasing institutional commitment and public awareness will enhance ESD implementation and foster sustainable practices in Indonesia.

Keywords: education, sustainable development, public perception, institutional support, curriculum integration

Corresponding Author: Haryo Kusumo Aji; email: haryokusumoaji@unisri.ac.id

Published: 8 August 2025

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the 6th ICTESS: Education and Social Science Conference Committee.

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1. Introduction

Education for Sustainable Development (ESD) is an educational approach that aims to provide knowledge, skills, values, and actions necessary to address interconnected global challenges such as climate change, biodiversity loss, unsustainable resource use, and inequality. As a lifelong learning process, ESD integrates cognitive, social-emotional, and behavioral dimensions into education to prepare learners to take informed actions. In the current global context, where environmental challenges are increasing, ESD plays a crucial role in transforming individuals into change agents who contribute to sustainable development. However, in Indonesia, the understanding and application of ESD remain limited due to several challenges. This study examines the level of public

understanding of ESD and the factors affecting its implementation, providing insights to improve its integration into educational curricula.

ESD is a lifelong learning process and an integral part of quality education. It enhances the cognitive, social-emotional and behavioral dimensions of learning, and encompasses learning content and outcomes, pedagogy and the learning environment itself. In today's global context, where climate change and other environmental issues are increasingly pressing, ESD is becoming increasingly relevant. Through ESD, learners are not only taught about environmental issues, but also trained to become agents of change who can contribute to sustainable development. [1]

In practice, ESD in Indonesia promotes lifelong learning and the integration of sustainability issues into the education curriculum. ESD aims to develop competencies that enable individuals to reflect on their actions in light of their social, economic and environmental impacts, both now and in the immediate future. [2] Although ESD has been globally recognized as an important component in achieving sustainable development goals, there are still many who do not understand this concept in depth. Of course, the lack of understanding in understanding ESD can affect the performance in implementing ESD. This research, which was conducted in September 2024, aims to find out how far the Indonesian people understand ESD and the factors that influence understanding in ESD practices. This research can contribute to the evaluation of efforts to improve the understanding and practice of ESD in society.

2. Literature Review

Education for Sustainable Development is an educational approach that aims to develop the knowledge, skills, values and attitudes needed to create a sustainable future. ESD plays an important role in changing the behavior of individuals and communities towards more sustainable practices. The Indonesian government has adopted the concept of ESD in national education policy, as stated in the Law of the Republic of Indonesia No. 20 Articles 3, 4 and 35 of 2003 on the National Education System. However, the implementation of ESD still faces various challenges, including a lack of understanding and support from various stakeholders.

Studies show that the level of public understanding of ESD is still low, and ESD practices have not been widely applied in daily life. Factors such as lack of socialization,

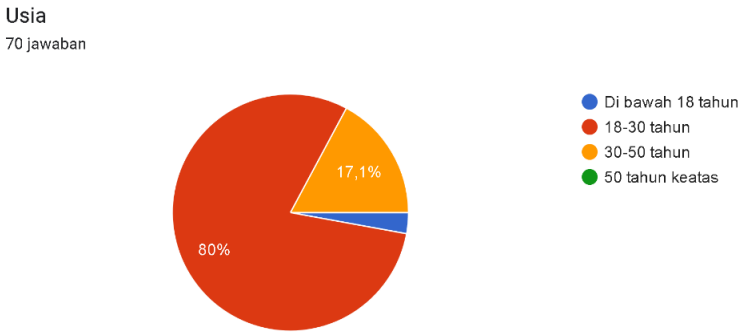
limited resources, and lack of training for educators contribute to the low understanding and practice of ESD.

Education has a key role in raising ESD awareness and practice. The integration of ESD in school curricula and higher education programs can help improve students' understanding and engagement in sustainability issues. Case studies in various schools show that integrated environmental education can increase awareness and sustainable actions among students. Analysis of case studies from various educational institutions that have successfully implemented ESD can provide insights into effective strategies for improving ESD understanding and practice. Supporting factors such as support from school authorities, teacher training, and the use of engaging learning methods are critical to the successful implementation of ESD. [3]

3. Methodology

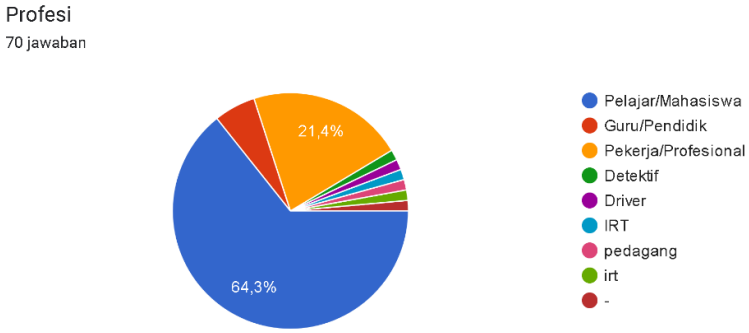
This research uses a mixed methods approach, mixed research method is an approach that combines quantitative and qualitative methods in one study to obtain a more comprehensive understanding of a phenomenon. This approach allows researchers to collect and analyze numerical data as well as descriptive data, which can complement each other. By using mixed methods, researchers can explore and understand the social, cultural, and behavioral contexts that influence quantitative results. This approach is used to deeply understand the level of understanding and practices of Indonesian people related to ESD, by combining numerical data (quantitative) as well as the views or opinions of research subjects (qualitative). [4]

The research was conducted in September 2024, with 70 respondents consisting of education and worker in Indonesia. The average age of respondents ranged from 18 to 50 years old who are expected to have a significant role in sustainable development. The research focused on the areas of education, sustainable development and community development. The sample in the study was taken using non-probability sampling method with convenience sampling technique, which is a sample technique selected from the easiest, closest or available respondents in taking research data.[5] Respondents who were willing to fill out the questionnaire were selected based on ease of access and availability, with the distribution of the questionnaire conducted online.



*Age

* Profession



Data were collected through a survey with a questionnaire distributed using Google Forms. The questionnaire included quantitative questions (Likert scale) to measure the level of understanding and implementation of ESD as well as open-ended questions (qualitative) to capture personal opinions and reflections related to the importance of ESD in daily life.

The questionnaire included both quantitative and qualitative components. The quantitative section measured respondents' knowledge, attitudes, and perceptions regarding ESD using a Likert scale (1-5). Key parameters assessed were:

1. Awareness of ESD (whether respondents had heard about ESD).
2. Level of understanding (measured using a Likert scale).
3. Sources of ESD information (social media, academic institutions, government policies, etc.).
4. Importance of ESD in education (respondents' rating on a scale of 1-5).

5. Institutional implementation of ESD (whether ESD is incorporated in their educational or work environments).
6. Perceived barriers to ESD implementation (lack of resources, insufficient socialization, institutional challenges).
7. Suggestions for improving ESD understanding and practice.

The questions asked are as follows:

1. Have you ever heard of Education for Sustainable Development (ESD)?
2. How well do you understand the concept of ESD?
3. Where did you get the information about ESD?
4. How important do you consider ESD in education today?
5. Do you think your current institution adequately covers ESD?
6. How do you think ESD can contribute to achieving the Sustainable Development Goals (SDGs)? (Give examples and your ideas, or ignore the question if you are not familiar with ESD).
7. Has your institution (school/university/company) implemented ESD?
8. What are the challenges you see in implementing ESD in your environment?
9. What do you think can be done to improve the understanding and implementation of ESD in education?
10. Do you have any other suggestions to improve the implementation of ESD in your institution or community?

In the questions given, the parameters used to measure the interviewees' answers are a dichotomous scale, to find out whether they have heard about ESD and a Likert scale, to find out how good they are in understanding, attitudes and perceptions about ESD. [6]

3.1. Research Instruments

The main instrument in this study was an online questionnaire, which consisted of:

Quantitative part: Measures people's knowledge and attitude towards ESD through closed-ended questions (such as Likert scale 1-5).

Qualitative section: Open-ended questions designed to explore personal views and deeper understanding of ESD.

3.2. Data Analysis

Quantitative data: Results from the closed-ended questions will be statistically analyzed to see the level of understanding, awareness, and practice of ESD among the respondents. Descriptive statistical analysis (such as mean, percentage, and standard deviation) is used to illustrate general trends.

Qualitative data: Answers from open-ended questions will be analyzed using thematic analysis, where recurring patterns and themes will be identified to gain deeper insights into community perspectives on ESD.

With this mixed approach, the research is expected to provide a comprehensive picture of Indonesian people's understanding and practice of Education for Sustainable Development (ESD), as well as the factors that influence its implementation in daily life.

4. Results and Discussion

4.1. Quantitative Data

From 70 respondents consisting of students, educators, workers, and other professions, with an age range of 18-50 years old, here are the main findings based on the questionnaire survey:

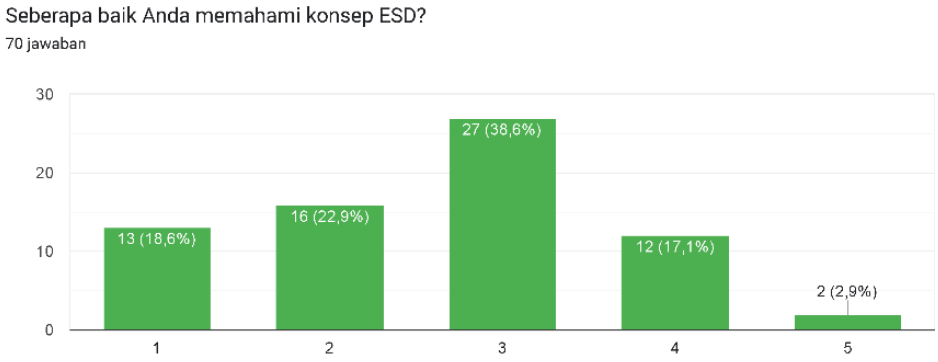
TABLE 1: Public Awareness and Understanding of ESD.

Survey Question	Response (%)
Have you ever heard of ESD?	60%
How well do you understand ESD (Likert scale 1-5)?	3 out of 5
Where did you get information about ESD?	57.4% from social media/internet
How important is ESD in education (Likert scale)?	37.1% rated 4/5
Does your institution implement ESD?	64.3% yes
Main challenges in implementing ESD	80% cited lack of knowledge

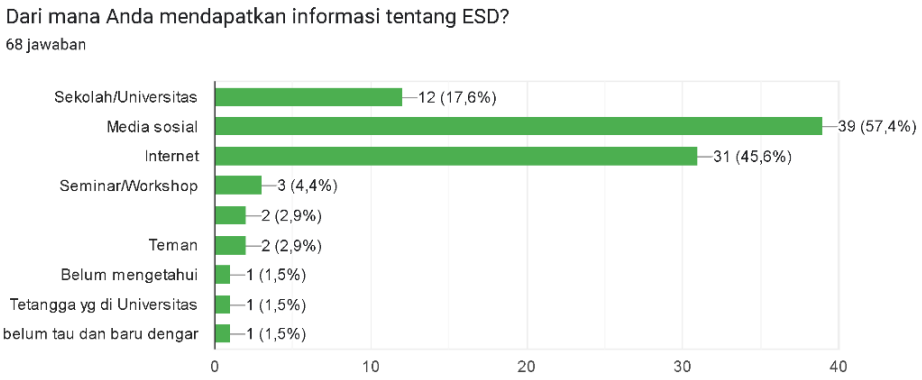
Understanding of ESD: 60% of the respondents had heard about the concept of Education for Sustainable Development (ESD), but only 3 out of 5 on the Likert scale understood the concept of ESD and did not know its specific implementation in daily life. Meanwhile, 57.4% of those who got information about ESD through social media and the internet.

* Have you ever heard of Education for Sustainable Development (ESD)?

* How well do you understand the concept of ESD?

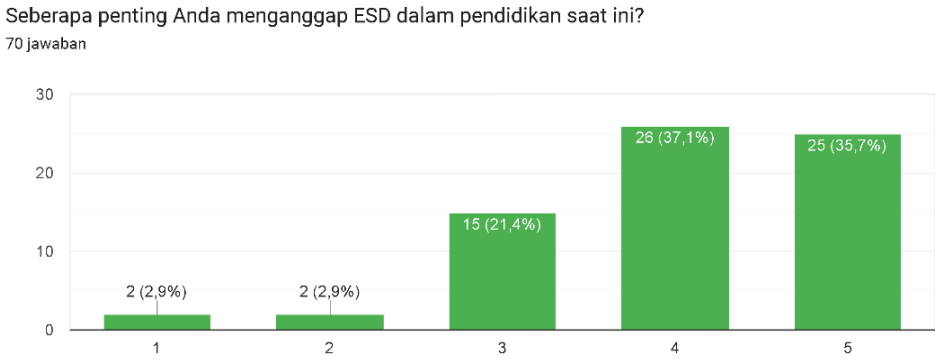


* Where did you get the information about ESD?



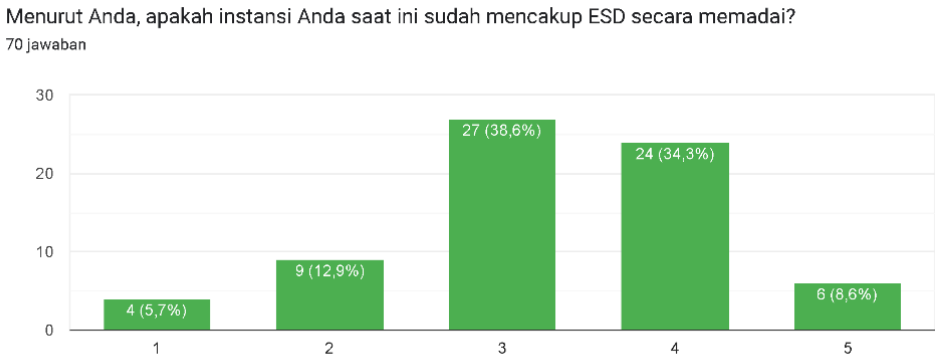
Attitudes and Perceptions about ESD: 37,1% of voting respondents rated 4 out of 5 on a Likert scale as important ESD in Education and current implementation.

* How important do you consider ESD in education today?

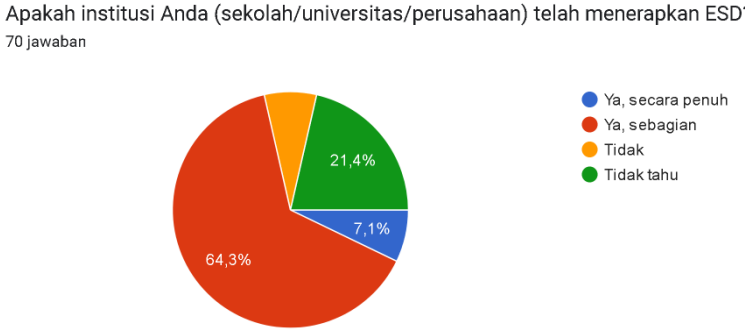


ESD practice: In practice, there were 51 votes answering that the respondents' institutions currently cover ESD adequately. In terms of implementation, 64,3% of the institutions have implemented ESD. However, there are still many challenges in implementing ESD in the interviewees' environment.

* Do you think your current institution adequately covers ESD?



* Has your institution (school/university/company) implemented ESD?



Motivation and environmental support: Respondents who implement ESD practices mostly stated that the social environment, such as a supportive school or community,

is a motivating factor for people to understand the concept of ESD, which can then be a provision in implementing ESD.

Obstacles in implementing ESD: Most of the respondents, 80%, mentioned that the factor of the challenge is the lack of knowledge of the community in understanding the concept of ESD. Lack of support from agency management and resources is also an obstacle factor in implementing ESD.

4.2. Qualitative Data

From the analysis of the qualitative responses, several main topics that were frequently expressed by respondents related to ESD understanding and practice emerged:

Confusion about the concept of ESD: Respondents stated that people are still unaware and unfamiliar with the concept of ESD. One of the respondents, Alvin, stated that, “For myself, I don’t understand what ESD is, but I personally think that education is needed first for ordinary people like me who don’t know enough to have a broader knowledge about good and right ESD.”

It is necessary to include the concept of ESD with more depth in the teaching curriculum: With the lack of public understanding of the concept of ESD, the role of the Education government in preparing the curriculum by integrating the concept of ESD with the existing curriculum is important. Respondent Rafi Ardiansyah argues that “by entering into the compulsory curriculum, so that every student understands the importance of ESD from an early age.”

Thematic analysis of qualitative responses revealed three major themes:

1. **Confusion about the ESD concept**: Many respondents were unfamiliar with ESD terminology. One participant stated, *“I don’t really understand what ESD is, but I think education about sustainability should be more accessible to the general public.”*

2. **Need for deeper integration into curricula**: Respondents suggested that ESD should be embedded into the national curriculum. One participant commented, *“If ESD were included as a mandatory subject in schools, more students would be aware of sustainability issues from an early age.”*

3. **Institutional and resource challenges**: Many respondents highlighted the lack of funding and institutional commitment as barriers to ESD implementation.

4.3. Research Limitations

This study has several limitations, among others:

Sample Size: With only 70 respondents, the results of the study may not be generalizable to a larger population.

Data Collection Methods: Reliance on questionnaire surveys may limit the depth of information obtained. The qualitative data obtained provides additional insights, but not all respondents may feel comfortable sharing their views openly.

Respondent Variability: The diverse backgrounds of respondents may affect the results, especially if they are unbalanced in their representation of certain groups.

4.4. Recommendations for Further Research

The results of this study can be used as a basis for further research on ESD with a focus on:

Curriculum Development: Further research can explore how the education curriculum can be changed to incorporate ESD effectively.

Case Study: Conduct case studies in specific educational institutions to understand more about ESD practices and challenges faced.

Awareness Raising: Develop intervention programs to increase awareness and understanding of ESD among communities and students.

As such, this research not only provides an overview of the current state of affairs regarding ESD but also paves the way for future improvement efforts.

5. Conclusion

This study aimed to assess the understanding and practice of ESD in Indonesia. Key findings reveal a knowledge-action gap: 60% of respondents were aware of ESD, but only 37.1% understood its practical implications. Institutional implementation (64.3%) is hindered by limited resources and community awareness. To address this, the government must prioritize teacher training and curriculum integration, while institutions should adopt participatory ESD frameworks. These steps align with SDG 4.7, ensuring inclusive and equitable quality education for sustainable development. The findings indicate that while awareness of ESD is relatively high (60%), deeper understanding and

practical implementation remain limited. The primary barriers identified include lack of knowledge, inadequate institutional support, and limited resources. Given these challenges, the study underscores the importance of integrating ESD into national curricula and increasing public awareness through government-led initiatives. Future research should focus on intervention strategies, case studies of successful ESD integration, and expanding survey coverage to obtain more representative data.

The limited knowledge of the community and the lack of support from agency management are the main hindering factors in the implementation of ESD. Therefore, it is important for the government and educational institutions to integrate the concept of ESD into the curriculum more deeply so that the understanding and application of ESD can be improved early on. The results also show that the social environment, such as a supportive school or community, is a driving factor for people to understand the concept of ESD. However, there are still many challenges faced, such as lack of socialization, limited resources, and lack of training for educators.

Recommendations for future research include the development of a more effective curriculum, case studies in specific educational institutions to understand more about ESD practices, and the development of intervention programs to increase awareness and understanding of ESD among communities and students. Thus, this research can contribute to the evaluation of efforts to improve the understanding and practice of ESD in society.

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