

The Effectiveness of Trashbags in the Merdeka Sampah Action with Disabled Persons as a Manifesto of the East Java Nasyyatul Aisyiyah Inclusive Movement

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ABSTRACT

Waste is one of the pressing environmental problems in Indonesia, with waste generation in East Java reaching 16,759 tons per day (SIPSN, 2024). Public awareness of the importance of waste segregation still needs to be increased. The Waste Freedom Movement with people with disabilities by Nasyyatul Aisyiyah East Java is an inclusive, innovative solution, involving the disabled community in education about waste sorting through colored trash bags (yellow, blue, green and red). This research aims to measure the effectiveness of trash bags as an educational medium and explore the challenges and opportunities of this inclusive environmental movement. The research was conducted in 8 districts/cities in East Java using qualitative methods, involving the disabled community and Special Schools (SLB). The results of this research showed that 90.9% of respondents strongly agreed that Trashbag made the educational process of sorting waste easier for people with disabilities, as many as 81.8% of respondents stated that they strongly agreed that flexible waste sorting Trashbags were used as an educational medium in various places, and 81.8% of respondents strongly agreed that the activity of sorting waste using waste sorting Trashbags for people with disabilities was a representation of manifesto of the East Java Nasyyatul Aisyiyah inclusive movement.

Keywords:

disabled, trashbag, merdeka sampah, inclusivity

1. Introduction

Waste is one of the pressing environmental problems in Indonesia. The volume of waste continues to increase every year, especially in urban areas, requiring innovative solutions that involve various elements of society. According to data (SIPSN, 2024) waste generation in East Java reached 16,759 tons per day. Sorting waste at the source is an important step in supporting sustainable waste management. However, public awareness of the importance of sorting waste is still relatively low, especially among vulnerable groups such as people with disabilities. Therefore, an inclusive approach is needed that can reach all levels of society, including people with disabilities, to contribute to this effort.

Nasyyatul Aisyiyah East Java is a Muhammadiyah young women's organization that focuses on empowering women and children. The aim of Nasyyatul Aisyiyah itself is to form an Islamic daughter who is meaningful to the family, state, nation and religion. Initiated the Waste Freedom movement as a manifesto for the women's movement who cares about environmental issues and equality. Waste freedom with people with disabilities aims to increase awareness and skills in sorting waste through an educational approach involving the disabled community. As a form of implementation, this movement uses trash bags with specific color codes to simplify the education process. The four types of trash bags used are yellow for plastic and Styrofoam, blue for paper and cardboard, green for organic waste, and red for B3 waste (Hazardous and Toxic Materials). This trash bag not only functions as a visual educational medium, but also as a tool in an interactive game with the theme of waste sorting.

This movement was carried out in eight cities in East Java, namely Banyuwangi, Jember, Situbondo, Surabaya, Malang, Sidoarjo, Magetan and Lamongan. By involving Special Schools (SLB) and local disabled communities, this activity integrates theoretical learning with direct practice. This approach is designed to ensure that waste segregation education is accessible to people with disabilities, while strengthening their sense of inclusion in environmental sustainability issues.

This research aims to measure the effectiveness of trash bags as an educational medium for the disabled community in the Waste Freedom movement. Using qualitative methods, data was obtained through questionnaires distributed to respondents from special schools and the disabled community. This research not only focuses on the success of educational media, but also explores the challenges and opportunities in creating an inclusive environmental movement. It is hoped that this study can make a real contribution to the development of community-based environmental programs and inclusiveness. Apart from that, it is also hoped that the results of this research can become a reference for expanding the implementation of similar movements in other regions, to support sustainable and inclusive waste management.

One of the interesting tools in the Waste Freedom program is the use of trash bags or colored trash bags. The four different trash bag colors, namely yellow (plastic/styrofoam), blue (paper/cardboard), green (organic), and red (B3), are used as an educational medium to distinguish types of waste. Through games and activities involving colored trash bags, participants are invited to understand the importance of sorting waste from the source. This research aims to examine the effectiveness of using colored trash bags in increasing awareness and understanding of waste management among people with disabilities. By using qualitative methods by distributing questionnaires to respondents from special schools and disabled communities in various regions in East Java, this research is expected to provide a clearer picture of the impact of the Merdeka Sampah program on changes in respondents' behavior and knowledge regarding waste management. It is hoped that the results of this research can contribute to: developing an inclusive and effective environmental education model for disabled groups, increasing understanding of the important role of the disabled community in environmental conservation efforts and providing recommendations for the development of similar programs in other areas.

2. Methods

This research uses a descriptive qualitative method, which aims to provide an in-depth and clear picture of social phenomena related to the effectiveness of trash bags in the Waste Freedom movement with the disabled. This approach was chosen to understand in depth how trash bags with yellow, blue, green and red color codes are used as an educational medium for waste sorting and how the disabled community responds and is involved in this activity.

2.1 Research Location

This research was conducted in eight regions in East Java, namely Banyuwangi, Jember, Situbondo, Surabaya, Malang, Sidoarjo, Magetan and Lamongan. This location was selected based on the existence of Special Schools (SLB), Inclusive Schools and active disabled communities, as well as their involvement in environmental programs.

2.2 Research Subjects

The research subjects were members of the disabled community who were involved in Merdeka Sampah activities, including students and teachers from SLB as well as members of the disabled community in each region. Apart from that, the facilitator or Nasyyatul Aisyiyah cadre who organized the activity also became an informant to gain views regarding the effectiveness of the educational media used. The types of disabilities of students include hearing impairment, autism, visual impairment & reduced vision, speech impairment, intellectual impairment and movement impairment or physical impairment, and Down Syndrome. And the following are the institutions that are the locations for the Waste Freedom activities with the Disabled.

No.	Institution Name	Regency / City
1.	SLB Muhammadiyah Lamongan	Lamongan
2.	SLB Muhammadiyah Tunas Bangsa Asembagus	Situbondo
3.	SLB Negeri Jember	Jember
4.	SLB Panca Bhakti Magetan	Magetan
5.	SD Muhammadiyah 2 Sidoarjo	Sidoarjo
6.	SLB Tunarungu YPTB Malang	Malang
7.	SLB Muhammadiyah Licin Banyuwangi	Banyuwangi
8.	Sekolah Inklusif Galuh Handayani	Surabaya

2.3 Data Collection Techniques

The data in this research was collected through:

- Questionnaire: Questionnaires were distributed to participants to evaluate their understanding of the concept of waste sorting, ease of use of colored trash bags, and their views on this activity.
- In-depth Interviews: Interviews were conducted with members of the disabled community, special school teachers, and facilitators to explore experiences, challenges, and impacts of using trash bags as an educational medium.
- Participatory Observation: Researchers were directly involved in Merdeka Sampah activities to observe participants' interactions with colored trash bags, both in educational sessions and in waste sorting games.

3. Results and Discussion

The Waste Freedom Movement not only has an impact on participants' understanding of waste management, but also strengthens social inclusivity. By involving the disabled community, this movement creates space for them to contribute to environmental sustainability issues. As a manifesto for an inclusive movement, Merdeka Sampah reflects Nasyyatul Aisyiyah's mission to empower all levels of society. An approach that prioritizes education, interactive games and cross-community collaboration shows that this movement is not only oriented towards the environment, but also towards social empowerment. The educational trash bags for sorting waste which have been launched by the Nasyyatul Aisyiyah Regional Leader come in 4 colors, namely (yellow for plastic/styrofoam, blue for paper/cardboard, green for organic waste, and red for B3 waste). The use of this visualization of waste categories makes it easier for anyone to know that the waste that will be thrown away should go into what color bag. The following is the appearance of a trash bag made from 190T waterproof fabric. Educational trash bags using cloth also aim to be flexible, easy to carry anywhere and used for clean up activities in river areas, beaches, fields and places where it is not possible to carry large trash cans, so this trash bag is also a practical solution.



image of trash bag sorting waste design by Merdeka Sampah Regional Leader Nasyyatul Aisyiyah East Java

3.1 Effectiveness of Trashbags as an Educational Media for Waste Sorting

Color-coded trash bags (yellow for plastic/styrofoam, blue for paper/cardboard, green for organic waste, and red for B3 waste) have proven to be an effective medium in educating the disabled community about waste sorting. Based on observations and interviews, the use of striking colors makes it easier for participants to understand waste categories, especially for those who have cognitive limitations or have difficulty reading. The results of this questionnaire data show that 90.9% of respondents felt that this action provided an understanding of waste sorting for people with disabilities. This is a very high number, indicating that the program or action carried out has succeeded in achieving its goal of providing education or awareness to disabled people about the importance of sorting waste. In addition, specific colors minimize errors in sorting waste, both in educational simulations and daily practice. This is in line with previous studies which state that color-based visual media can increase information absorption (Hartono, 2021). This high percentage can also be used as an indicator that the method or approach applied is quite effective. If there is room for improvement, it can be seen from 9.1% of respondents that additional adjustments may be needed in the delivery of materials or methods to be more inclusive.

From the results of the questionnaire data, it was also found that the use of Trashbags as an educational tool for sorting waste is very effective. As many as 90.9% of respondents stated that they strongly agreed that Trashbag made the educational process of sorting waste easier for people with disabilities. These results show that visual and practical tools such as Trashbag are able to bridge

special needs in the education process for the disabled community. With a simple and easy to understand design, Trashbag functions not only as an educational medium but also as an inclusive means to increase environmental awareness. This success emphasizes the importance of an adaptive approach in implementing environmental education, especially for community groups with specific needs. Furthermore, a similar approach can be applied more widely to create inclusive and sustainable educational programs.

3.2 Waste Sorting Game as an Inclusive Approach

The trash sorting game session involving colored trash bags is an effective interactive method in attracting participants' interest. This game is not only a learning tool, but also builds self-confidence and a spirit of collaboration among the disabled community. For example, participants from SLB in Jember showed high enthusiasm in practicing waste sorting during the game. This activity creates an inclusive atmosphere, where differences in abilities are not an obstacle, but an opportunity to support each other. These findings strengthen the opinion of Yulianti (2022), that an active participation-based approach can strengthen the involvement of people with disabilities in the environmental movement.

Based on the results of the questionnaire, as many as 81.8% of respondents stated that they strongly agreed that flexible waste sorting Trashbags were used as an educational medium in various places. This figure shows a very dominant positive response to the use of trash sorting trash bags as an environmental education tool. Trash bags for sorting waste have advantages in terms of portability and ease of use. With a simple, light and practical design, this media can be used in various locations such as homes, schools, workplaces and community activities. This makes it an educational tool that can reach various levels of society. This media not only functions as a tool for sorting waste, but also as a visual reminder and direct education to the public about the importance of sorting waste according to its categories (organic, inorganic, and others). In any situation, Trashbags for sorting waste can make it easier to implement the 3R concept (Reduce, Reuse, Recycle).

As a medium that can be used anywhere, Trashbag sorting waste opens up opportunities to expand the reach of education, including in areas that are difficult to reach by other educational media. Trash bags for sorting waste can be used in various activities such as environmental cadre training, cleanliness campaigns, and school or community programs. This makes environmental education more interactive and applicable. The results of the questionnaire which showed that 81.8% of respondents strongly agreed were an indication that Trashbag sorting waste is an educational media that is flexible, easy to implement and effective. This potential can be maximized by integration into wider environmental education programs, such as in schools, communities and organizational activities such as Nasyyatul Aisyiyah. With a consistent approach, this media can contribute significantly to creating a society that cares more about the environment.

3.3 Manifesto of the East Java Nasyyatul Aisyiyah Inclusive Movement

The results of the questionnaire showed that 81.8% of respondents strongly agreed that the activity of sorting waste using Trashbags for people with disabilities was a representation of the manifesto of the East Java Nasyyatul Aisyiyah inclusive movement. These findings reflect the public's appreciation for the organization's efforts to prioritize inclusivity as one of the main principles of social movements and environmental education. The inclusive movement promoted by Nasyyatul Aisyiyah East Java aims to involve various levels of society regardless of age, gender, social status or background. This is in accordance with the spirit of the Muhammadiyah organization's *da'wah* which prioritizes equality and justice. This manifesto was translated into real programs that are cross-

sectoral, one of which is through an educational campaign to sort waste. With an accessible approach, this activity shows support for the wider community, including vulnerable communities who are often less reached by formal environmental campaigns.

As a women's organization, Nasyyatul Aisyiyah East Java strategically places women as the main driver. This program provides a space for women cadres to not only understand the importance of sorting waste, but also to spread sustainable values to various groups, so that the impact becomes wider. Support of 81.8% shows high public acceptance of an inclusive educational approach. This is clear evidence that the community sees this program as a progressive step in increasing collective awareness regarding waste management. Apart from that, this program is also considered to represent the organization's core values, namely social justice, community empowerment and environmental sustainability. In this context, the manifesto of the inclusive movement is not only reflected in physical activities such as sorting waste, but also in the process of community empowerment. Environmental education carried out with an approach that is easily accessible to all groups strengthens Nasyyatul Aisyiyah's position as a pioneer of social change that is relevant and responsive to the challenges of the times.

The results of this questionnaire provide three main implications:

- **Strengthening Organizational Identity:** Waste sorting activities carried out in an inclusive manner strengthen Nasyyatul Aisyiyah's position as a women's organization that is progressive and cares about the environment.
- **Increased Community Participation:** The high take-up rate shows great potential for expanding this program to broader communities, including rural areas and marginalized groups.
- **Support for SDGs:** This program is in line with the Sustainable Development Goals, especially points 12 (Responsible Consumption and Production) and 13 (Action on Climate Change).

The waste sorting program implemented by Nasyyatul Aisyiyah East Java is a concrete embodiment of the manifesto of the inclusive movement. The high level of community acceptance, as shown by the questionnaire results, strengthens the position of this program as a means of community empowerment as well as a strategic step to encourage wider environmental awareness. In the long term, it is hoped that this movement can become a model for other organizations that want to integrate inclusivity and sustainability in their social activities.

4. Conclusion

This movement is a clear example of how environmental issues can be integrated with inclusive values, creating a synergy that strengthens sustainability awareness while providing social benefits for disabled groups. Colored trash bags as an educational medium have proven effective in supporting the Waste Freedom movement with people with disabilities. The trash sorting game provides a fun and inclusive learning experience, while the movement as a whole creates a positive impact in environmental and social aspects. However, program sustainability requires facility support, ongoing education, and cross-sector collaboration. The results of the interviews showed that participants with disabilities felt appreciated and actively involved.

5. References

Setyowati, A., Emzulia, H., & dkk. (2024). *Progressif*. Surabaya: Pimpinan Wilayah Nasyyatul Aisyiyah Jawa Timur.

Yulianti, T. (2022). *Edukasi Lingkungan melalui Media Visual untuk Komunitas Difabel*. Surabaya: Universitas Negeri Surabaya Press.

UNESCO. (2020). *Inclusive Education: Ensuring No One is Left Behind*. Paris: UNESCO Publishing.

Kuncoro, A. (2019). *Pendidikan Inklusif di Indonesia: Tantangan dan Harapan*. Jakarta: Gramedia Pustaka Utama.

Sutanto, A. (2020). *Pengelolaan Sampah Berbasis Komunitas: Praktik dan Tantangan*. Jakarta: Pustaka Hijau.

Muhammadiyah Environmental Council. (2020). *Prinsip Lingkungan Berkelanjutan dalam Dakwah Muhammadiyah*. Yogyakarta: Suara Muhammadiyah.

United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. New York: United Nations Publications.

Hartono, R. (2021). Trashbag Berwarna sebagai Media Edukasi Pilah Sampah. *Jurnal Inovasi Pendidikan Lingkungan*, 9(2), 123-134.

Nasyyatul Aisyiyah Jawa Timur. (2023). *Laporan Program Kampanye Pilah Sampah*. Surabaya: Nasyyatul Aisyiyah Jawa Timur.

Kementerian Lingkungan Hidup dan Kehutanan, Direktorat Jenderal Pengelolaan Sampah, Limbah dan B3 Direktorat Penanganan Sampah. (2024). *Data Timbunan Sampah Provinsi Jawa Timur*.

Hadi, S., & Putri, M. (2019). Keberlanjutan Lingkungan dan Difabel: Studi Kasus di Jawa Timur. *Jurnal Lingkungan Inklusif*, 7(3), 45-56.