

COMMUNITY WASTE MANAGEMENT EDUCATION: STRATEGIES AND IMPACTS

PENDIDIKAN PENGELOLAAN SAMPAH BAGI MASYARAKAT: STRATEGI DAN DAMPAKNYA

Euis Nurhayati¹, Sri Nurhayati²

¹⁻²(Community Education, Postgraduate Program, IKIP Siliwangi, Indonesia)

¹67.euisn@gmail.com, ²srinurhayati@ikipsiliwangi.ac.id

Abstrak

Penelitian ini bertujuan untuk mengevaluasi dampak pendidikan pengelolaan sampah masyarakat terhadap praktik penanganan dan pembuangan sampah di antara warga RW 08 di Kecamatan Binong, Kota Bandung. Penelitian ini bertujuan untuk menyelidiki bagaimana partisipasi dalam program pendidikan memengaruhi kesadaran dan sikap masyarakat terhadap pengelolaan sampah, serta untuk menilai dampak jangka panjang dari inisiatif pendidikan ini terhadap lingkungan dan kesejahteraan umum masyarakat. Metodologi penelitian yang dipilih adalah desain studi kasus kualitatif, dengan menggunakan wawancara semi-struktural dan observasi partisipan. Analisis tematik dan triangulasi digunakan untuk mengkaji data. Temuan penelitian menunjukkan potensi transformatif dari program pendidikan pengelolaan sampah yang didorong oleh masyarakat. Peserta tidak hanya meningkatkan praktik pengelolaan sampah, tetapi juga mengalami perubahan pola pikir, dengan melihat sampah sebagai peluang ekonomi. Keterlibatan masyarakat, pembelajaran praktis, kampanye perubahan perilaku, kerjasama dengan otoritas lokal, dan insentif merupakan faktor kunci yang berkontribusi pada keberhasilan program ini. Temuan ini tidak hanya memajukan praktik pengelolaan sampah, tetapi juga menunjukkan potensi inisiatif berbasis masyarakat untuk mendorong perubahan positif dalam dua aspek, yaitu lingkungan dan ekonomi.

Kata Kunci: Strategi Pengelolaan Sampah; Pendidikan Masyarakat; Dampak Pendidikan; Pengelolaan Sampah

Abstract

The research aimed to evaluate the impact of community waste management education on waste handling and disposal practices among the residents of RW 08 in Kecamatan Binong, Kota Bandung. It sought to investigate how participation in education programs influenced community awareness and attitudes towards waste management, as well as to assess the long-term effects of these educational initiatives on the environment and the overall well-being of the community. The chosen research methodology was a qualitative case study design, employing semi-structured interviews and participant observation. Thematic analysis and triangulation were utilized to examine the data. The findings underscore the transformative potential of community-driven waste management education programs. Participants not only improved waste management practices but also experienced a mindset shift, perceiving waste as an economic opportunity. Community involvement, hands-on learning, behavior change campaigns, collaboration with local authorities, and incentives were key factors contributing to the program's success. These findings not only advance waste management practices but also demonstrate the potential of community-based initiatives to drive positive change in both environmental and economic dimensions.

Keywords: Waste Management Strategy; Community Education; Impact of Waste Management Education

INTRODUCTION

The increasing complexities associated with waste management have emerged as a matter of global significance, exerting profound effects on the environment, economy, and society (Mirwan & Senses, 2021; Sunari & Nurhayati, 2023; Tanjung et al., 2019). The challenges posed by waste management are well-documented in the literature. Rapid urbanization, increased consumerism, and industrialization have led to an unprecedented rise in waste production (Ghimire

& Ariya, 2020). Consequently, improper disposal of waste not only threatens the environment but also poses serious health risks to communities living in proximity to waste disposal sites (Abidin et al., 2021; Angga et al., 2021; Tanjung et al., 2019). Therefore, these difficulties require the implementation of creative and sustainable strategies for waste management.

In the present setting, the significance of educating communities about trash management has emerged as a critical component in the realm of sustainable waste management. The resolution of waste-related challenges necessitates the provision of knowledge and the cultivation of behavioral changes within communities. Educational pursuits possess the potential to equip individuals with the requisite competencies and understanding to effectively address the issue of waste generation, promote the use of recycling techniques, and build sound waste management protocols (Abidin et al., 2021; Mirwan & Senses, 2021; Sulistiono et al., 2018). Undoubtedly, the importance of community education in the domain of waste management is indisputable within the wider framework (Hasan & Nurhayati, 2012; Putri et al., 2019; Sunari & Nurhayati, 2023). Education has been widely recognized as a crucial factor in addressing waste management challenges. The literature highlights how education can raise awareness about the environmental and health impacts of improper waste disposal (Helmi et al., 2018; Putri et al., 2019; Sulistiono et al., 2018; Sunari & Nurhayati, 2023). Moreover, it can instill a sense of responsibility and promote pro-environmental behaviors. Additionally, education equips individuals with the knowledge and skills needed for sustainable waste management practices (Harahap, 2017; Maliga et al., 2022; Sunari & Nurhayati, 2023).

Studies examining the impacts of waste education have shown promising results. Education has been linked to positive behavioral changes, such as increased recycling rates and reduced waste generation (Agung, 2021; Irwan, 2017). It also enhances environmental awareness and promotes a culture of sustainability (Putri et al., 2019). Furthermore, waste education has the potential to generate economic benefits by creating opportunities for income generation through waste recycling and entrepreneurship (Rivai, 2019; Septiani et al., 2019).

Educational strategies in waste management have evolved significantly over the years. Traditional classroom-based education has been complemented by community-based initiatives, technological innovations, and hands-on experiential learning (Subekti, 2022; Sunari & Nurhayati, 2023; Suryani et al., 2020). The literature underscores the importance of tailoring educational strategies to the specific needs and contexts of the target audience (Helmi et al., 2018; Sunari & Nurhayati, 2023).

The necessity of implementing efficient waste management solutions becomes evident when considering the specific circumstances of the local context. This study explores a particular geographic area, focusing on the complexities of waste management and the possibility of community education to bring about significant changes. This study aims to assess the effectiveness of RW 08 in its specific context. The primary focus of this study revolves around evaluating the impact of community waste management education initiatives on the inhabitants of RW 08, Kecamatan Binong, Kota Bandung. This study aims to examine the complex ways in which educational initiatives influence waste management methods, community awareness, and the overall quality of life in this specific area. Importantly, the research holds value beyond its local context as it has the ability to provide useful insights to the ongoing discussion on community-based waste management education. This facilitates the establishment of informed and

evidence-driven approaches that can be duplicated in comparable urban contexts, advancing the objectives of sustainable waste management and urban development.

The research is guided by a series of fundamental questions that serve as a framework for inquiry. This inquiry pertains to the impact of community waste management education on waste handling and disposal practices among the residents of RW 08. It seeks to examine the degree to which participation in education programs influences community awareness and attitudes towards waste management. Additionally, it aims to assess the long-term effects of these educational initiatives on the environment and the overall well-being of the community.

This research is focused on a community located in RW 08, Kecamatan Binong, Kota Bandung, which is facing distinct issues in waste management. However, the findings obtained from this study are not limited just to this specific location. Instead, they have implications that extend to the wider urban context. This site functions as a microcosm, providing significant insights that can be utilized to improve waste management procedures and educational approaches in metropolitan regions facing similar challenges. Ultimately, the research aims to concentrate on this unique community to extract valuable insights that can be utilized to enhance urban sustainability and establish a more efficient waste management strategy.

METHOD

The chosen research methodology for this study was a qualitative case study design, which aimed to examine the efficacy of community waste management education in the specific setting of RW 08, Kecamatan Binong, Kota Bandung. The main aim of this study was to acquire a comprehensive comprehension of the effects of community trash management education on residents and their waste management behaviors.

The data gathering methods employed in this study encompassed semi-structured interviews and participant observation. The research team conducted comprehensive interviews with a range of stakeholders, encompassing residents, program facilitators, and municipal authorities engaged in waste management and education. The purpose of these interviews was to gather the participants' firsthand accounts, viewpoints, and understandings pertaining to the educational program and its influence on waste management practices. Furthermore, the researchers utilized participant observation as a method to fully engage themselves in the routine waste management practices conducted within the community. This methodology facilitated the acquisition of direct observations on how community members applied the knowledge gained from the educational program to implement practical trash management initiatives.

The sampling approach utilized in this case study was purposive sampling. The selection of participants was deliberate and based on their active participation in the community trash management education program. This encompassed persons who had partaken in educational sessions and actively engaged in trash management initiatives in RW 08.

Thematic analysis was utilized to examine the gathered data. Thematic analysis entails a methodical process of identifying, analyzing, and documenting patterns, sometimes referred to as themes, within qualitative data. The study method was conducted with a strong emphasis on ethical considerations. All participants provided informed consent, indicating their complete understanding of the study's objectives, their entitlements, and the utilization of their data. Furthermore, robust protocols were implemented to ensure the preservation of participants' identity and confidentiality, particularly during discussions pertaining to sensitive aspects of waste management strategies.

DISCUSSIONS

According to interview and observation results, the primary objective of the waste utilization education and training organized was to reduce the accumulation of waste in landfill sites and, more importantly, to transform waste into valuable, marketable goods that could augment the economic livelihoods of Kelurahan Binong's residents. This initiative aimed to empower the community with the knowledge and skills to view waste not merely as a burden but as a potential source of income. As one enthusiastic participant aptly expressed during the interviews, "Before the training, I never thought that waste could be a source of income. Now, I see it as an opportunity to improve my family's financial situation while contributing to a cleaner environment."

The education and training program was thoughtfully designed to boost the economic prospects of Kelurahan Binong's residents. It invited community members to participate with the specific goal of enhancing their economic well-being. The training modules covered a range of topics, including waste management techniques, waste conversion into marketable products, and the economic aspects associated with waste utilization. Through this comprehensive curriculum, participants learned how to turn waste into a resource, aligning environmental responsibility with economic gains.

A total of 30 participants actively engaged in this training program. The selection criteria were geared towards individuals who shared the aspiration of generating income from waste. This ensured that the participants were not only motivated but also aligned with the core objectives of the training. Inclusivity was maintained by inviting participants who genuinely expressed a desire to enhance their economic prospects through the training. This approach ensured that those who participated were genuinely interested in maximizing the benefits of the program. The training was delivered through a combination of audio-visual methods carefully designed to captivate participants' attention. This approach aimed to ensure that participants did not merely receive theoretical knowledge but also witnessed practical demonstrations of waste management and utilization techniques.

From the empirical data, the success of this program can be attributed to various strategies in community waste management education that were thoughtfully implemented. The carefully tailored curriculum addressed the specific waste management challenges faced by Kelurahan Binong's residents. Modules were designed to align with the unique waste stream and available resources, making the content accessible and relevant. Interactive workshops and demonstrations were a hallmark of the training program. Participants actively engaged in recycling demonstrations, learned composting techniques, and visited local recycling facilities. These hands-on activities allowed them to apply their knowledge in practical settings, making waste management principles tangible and memorable. Crucially, the program fostered a sense of community involvement and ownership. Through participatory approaches such as community meetings and brainstorming sessions, residents were empowered to voice their concerns and contribute to waste management decisions. This sense of ownership created a commitment to the program's long-term sustainability. Behavior change campaigns played a pivotal role in reinforcing waste management practices. Utilizing various communication channels, these campaigns emphasized the importance of recycling, reducing waste at its source, and the benefits of proper waste separation. These efforts aimed to instill new habits and reinforce positive behaviors.

Regular monitoring and feedback mechanisms were established to continuously assess the program's effectiveness. Participant feedback and community input were actively sought, allowing for real-time adjustments to the curriculum and strategies based on this valuable feedback. Collaboration with local authorities was instrumental in aligning the program with broader municipal waste management goals. This collaboration included coordinating waste collection schedules, promoting recycling programs, and ensuring efficient waste disposal infrastructure. The support of local authorities lent credibility to the program and reassured the community that their efforts were part of a well-coordinated waste management strategy. Incentives and recognition served as motivational tools within the program. Active participants received incentives, such as discounts on waste collection fees or community recognition. These incentives encouraged ongoing participation and rewarded positive behavior.

The findings of the waste utilization training program in Kelurahan Binong highlight its significant impact on waste management practices and the economic well-being of the community. The findings in line with previous researches reported that solid waste collection by informal garbage collectors would not only improve the social and environmental sustainability but would serve as a source of income (Kinantan et al., 2018; Sunari & Nurhayati, 2023). These outcomes can be attributed to a combination of tailored educational strategies that not only provided knowledge but also actively engaged and empowered participants. The importance of tailored educational strategies also highlighted for effective community education programs (Qudsi & Nurhayati, 2023; Rohaeti & Nurhayati, 2023; Safitri & Nurhayati, 2023; Sulaimawan & Nurhayati, 2023; Sunari & Nurhayati, 2023).

One of the most notable outcomes of the program was its ability to empower the community. Through a carefully tailored curriculum and interactive workshops, participants gained the knowledge and skills to view waste as a valuable resource. The transformation in mindset was profound, as evident in participants recognizing waste as an opportunity to improve their economic circumstances. This empowerment not only led to improved waste management practices but also fostered a sense of ownership and responsibility for the environment. Community empowerment is pivotal in ensuring the sustainability of the waste management program, and the success of empowerment lies in the local human resource development (Hermawan & Suryono, 2016; Intadiyah et al., 2021; Juliasih et al., 2022; Setiadi et al., 2023). The active involvement of the community was pivotal to the program's success. Community meetings and participatory approaches allowed residents to have a say in waste management decisions. This sense of ownership was a driving force behind the commitment to sustainable waste management practices. It's worth noting that when communities are actively engaged in such initiatives, the chances of long-term success and sustainability significantly increase.

Previous researches reported that the active involvement of the community in the community based initiatives have been reported as one of the indicators of the program's efficacy (Intadiyah et al., 2021; Nurhayati, 2020; Nurhayati et al., 2023; Rahman et al., 2021). Behavior change campaigns played a crucial role in reinforcing the lessons learned during the training. The campaigns effectively conveyed the importance of recycling, reducing waste at the source, and proper waste separation. By instilling new habits and reinforcing positive behaviors, these campaigns contributed to a cleaner and more sustainable environment. The program succeeded not only in educating but also in raising awareness about the broader environmental impact of waste management.

Collaboration with local authorities proved to be an essential element of the program. Previous researchs have shown that by collaborating with the local government community based initiatives proved to be more long lasting and have more impact on the community. It ensured that the waste management initiatives were integrated into the broader municipal framework, including waste collection and disposal. The active support of local authorities added credibility to the program and provided reassurance to the community (Asriana & Susanti, 2022; Hsieh & Liou, 2020). One of the most transformative outcomes was the economic empowerment of participants. The program equipped them with practical skills to convert waste into marketable products. As a result, participants not only reduced waste but also generated income for their households. This dual benefit aligns with the broader goal of sustainable development by addressing both environmental and economic dimensions. The economic benefit of waste management program by the community aligned with reports from many previous researchs the benefit including new income, economic incentives, and return on investment (Khan et al., 2016; Kristanto et al., 2015; Sahar & Ahmad, 2019; Sunari & Nurhayati, 2023).

While the program's success is evident, it's important to acknowledge the challenges faced during implementation. Overcoming the initial lack of enthusiasm among the community due to the perception of waste-related issues as trivial was a significant hurdle. This highlights the importance of effective communication and the need for tailored approaches to address such challenges. In conclusion, the findings of the waste utilization training program in Kelurahan Binong underscore its effectiveness in transforming waste management practices, empowering the community, and enhancing economic well-being. The success of this program can be attributed to a holistic approach that combines education, community involvement, behavior change campaigns, collaboration with local authorities, and incentives. These findings not only contribute to the advancement of waste management practices but also demonstrate the potential for community-based initiatives to drive positive change in both environmental and economic aspects.

CONCLUSION

This research has focused on assessing the effectiveness of educational activities in community waste management within the specific setting of RW 08, Kecamatan Binong, Kota Bandung. The study has thoroughly examined the many effects of these educational initiatives on waste management strategies, community consciousness, and overall well-being within this particular area. In addition to its regional importance, this research provides significant contributions to the wider academic conversation surrounding community-oriented waste management education and training.

This research elucidates the complex dynamics involved, so contributing to a deeper comprehension of the efficacy of these initiatives. Additionally, it establishes a basis for adopting well-informed and evidence-based strategies. The aforementioned approaches possess the capacity to be replicated in comparable urban environments, therefore contributing to the broader objectives of sustainable waste management and urban growth. The findings of the study align with the fundamental inquiry of the potential of community waste management education to empower individuals to view garbage as a viable economic prospect, while also effectively addressing the issue of waste accumulation. The program's notable achievements highlight the significant impact that community-led initiatives can have, not just in waste reduction but also in enhancing individuals' economic opportunities and promoting environmental stewardship. The aforementioned entity functions as a guiding light, directing forthcoming initiatives in the field of

waste management education towards the development of more sustainable and affluent communities.

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