

Implementation of the Waste Bank Program in Instilling Islamic Ecotheology Values

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ABSTRACT

This study aims to analyze the implementation of the Waste Bank Program in instilling Islamic ecotheology values at MAN 2 Deli Serdang using a qualitative case study approach. Data were collected through observation, in-depth interviews, and documentation, then analyzed using the Miles and Huberman interactive model and tested for validity through source and technique triangulation. The results of the study indicate that the Waste Bank Program not only functions as an environmental management activity but also as a medium for internalizing Islamic ecotheology values, such as cleanliness as part of faith, trustworthiness, *mīzān* (balance), and the prohibition of *fasād* (destruction). The internalization of values occurs gradually through habituation, teacher role modeling, and integration into madrasah activities and culture. In addition, changes in student behavior were found in maintaining cleanliness and reducing the use of single-use plastics, although they are still situational and dependent on supervision. This program is supported by the commitment of the madrasah, the role of teachers, adequate facilities, as well as student participation, but there are still obstacles in the form of inconsistent behavior and the suboptimal internalization of values.

1. INTRODUCTION

The increasingly complex global environmental changes due to the rising volume of waste, pollution, and uncontrolled exploitation of natural resources have become a serious issue in sustainable development. This problem not only affects ecological aspects but also the social, economic, and spiritual aspects of society (Hilabi & Ulum, 2026). In the context of education, schools have a strategic role as a space for shaping environmental awareness from an early age. One of the innovations developing in the educational environment is the implementation of a waste bank program as an effort to manage waste based on the participation of school members, which is not only oriented towards cleanliness but also towards the formation of environmentally caring character (Khoirunnisa, Nazar, & Matin, 2025). From an Islamic perspective, concern for the environment has a strong theological foundation through the concept of Islamic ecotheology, which is the view that places humans as caliphs on earth who are responsible for maintaining the balance of nature (*mīzān*) and preventing corruption (*fasād*) (Laksono & Milah, 2025). These values affirm that activities of maintaining cleanliness and environmental preservation are not only social actions but also forms of worship and implementation of religious teachings (Adinugraha, Solehuddin, & Nasrudin, 2025). Therefore, the integration of environmental programs such as waste banks in Islamic educational institutions becomes relevant to instill ecological awareness rooted in Islamic values. MAN 2 Deli Serdang, as one of the state Islamic senior high schools, has strategic potential in developing education based on character and Islamic values, including in the field of environmental care. The implementation of the waste bank program in the school environment not only functions as a productive and educational waste management system, but also as a medium for

internalizing Islamic ecotheology values to students. Through activities of sorting, collecting, and managing waste, students are encouraged to understand that maintaining environmental cleanliness is part of the moral and spiritual responsibility of a Muslim. However, the implementation of the waste bank program in the context of instilling Islamic ecotheology values does not always run optimally. The challenges faced can include the low awareness of some school residents, limited supporting facilities, and the not yet optimal integration of religious values in environmental management practices. This indicates the need for an in-depth study on how the waste bank program at MAN 2 Deli Serdang is implemented and to what extent the program is able to effectively instill Islamic ecotheology values in the daily lives of students. Studies on waste bank-based environmental management have developed significantly in recent years. Previous research (Purwanti, 2021) shows that the waste bank program is effective in increasing public awareness of waste management, economic empowerment, as well as the implementation of the reduce, reuse, recycle (3R) concept. However, the study (Mahendra, et al., 2023) still focuses on the technical aspects of environmental management and economic benefits, and has not yet deeply integrated the dimensions of Islamic spiritual and theological values in its implementation, especially in the context of madrasa education.

On the other hand, the study (Nurussalamah, et al., 2024) emphasizing that humans have a responsibility as caliphs on earth to maintain the balance of nature (*mīzān*) and prevent corruption (*fasād*). However, the study tends to be conceptual-normative and has not been widely explored in the form of concrete program implementation in educational institutions, such as waste banks in madrasas. In fact, the integration of Islamic ecotheology values in environmental education practices is very important to shape ecological awareness that is not only cognitive but also spiritual and moral. Research (Megariska & Sukmana, 2026) Research on waste banks in educational environments has also been conducted, but it has been more focused on character building related to environmental care and strengthening project-based learning without explicitly linking it to the internalization of Islamic ecotheology values. This indicates a research gap, namely the absence of studies that comprehensively connect the implementation of waste bank programs with the systematic process of instilling Islamic ecotheology values in the context of public madrasahs. Based on this gap, the novelty of this research lies in the integration of three main dimensions, namely: (1) the implementation of a waste bank program as a participatory-based environmental management strategy in madrasahs, (2) the internalization of Islamic ecotheology values such as *tauhid*, *amanah*, *mīzān*, and the prohibition of *fasād* in waste management activities, and (3) the context of formal education at MAN 2 Deli Serdang as the research locus. This study not only views the waste bank as an ecological and economic instrument, but also as a medium for educating Islamic values that are spiritual-ecological in nature. Thus, this study offers a new contribution in the form of an integrative model between environmental education and Islamic ecotheology within the madrasah education system. This model is expected to enrich scientific studies on environmentally-based Islamic education while also providing practical contributions to the development of waste bank programs that are not only oriented towards cleanliness but also towards fostering students' ecological religious awareness.

2. METHODS

This research uses a qualitative approach with a case study type. The qualitative approach was chosen because this study aims to deeply understand the process of implementing the waste bank program in instilling Islamic ecotheology values at MAN 2 Deli Serdang, both in terms of meaning, experience, and social practices that occur in the madrasah environment. The qualitative approach allows researchers to explore phenomena holistically in their natural context (Creswell, 2024). Meanwhile, a case study is used because this research focuses on a specific location that is

analyzed in depth to gain a comprehensive understanding. The subjects of this study include school principals, teachers, waste bank program managers, as well as students who are directly involved in waste management activities. Informants were selected using a purposive sampling technique, which is a method of choosing informants based on certain considerations deemed to have knowledge and direct involvement with the phenomena being studied (Moleong, 2024). This technique is used so that the data obtained is truly relevant and in-depth according to the research focus. Data collection techniques were carried out through observation, in-depth interviews, and documentation. Observation was conducted to directly see the implementation of the waste bank program in the madrasah environment, including the activities of sorting and managing waste by students. In-depth interviews were used to explore understanding, experiences, and the internalization of Islamic ecological theology values in these practices. Documentation was used to obtain supporting data such as activity archives, madrasah policies, and relevant activity photos (Miles, Huberman, & Saldaña, 2024). Data analysis in this study used the interactive analysis model of Miles and Huberman, which includes three stages, namely data reduction, data display, and conclusion drawing/verification. This analysis process was carried out simultaneously and continuously from data collection in the field until the data was considered saturated (Arikunto, 2021). Data reduction is carried out by selecting relevant data, data presentation is done in the form of descriptive narratives, while drawing conclusions is done by verifying findings based on field data. The validity of the data was tested through source triangulation and technique triangulation. Source triangulation was carried out by comparing information from various informants, while technique triangulation was carried out by comparing the results of observations, interviews, and documentation. This technique is used to enhance the credibility and validity of research data (Lincoln & Guba, 1985). Thus, this research method is expected to be able to produce a deep, valid, and comprehensive picture of the implementation of the waste bank program in instilling the values of Islamic ecotheology at MAN 2 Deli Serdang.

3. RESULTS AND DISCUSSION

3.1. RESULTS

3.1.1. The Implementation of the Waste Bank Program at MAN 2 Deli Serdang from the Perspective of Islamic Environmental Education

Based on the observations conducted at MAN 2 Deli Serdang, the implementation of the Waste Bank Program from the perspective of Islamic Environmental Education indicates that the program has been systematically carried out and has gradually become part of the school culture embedded in the daily activities of the madrasah community. The Waste Bank Program is not merely positioned as a waste management activity, but also as a learning medium that integrates the values of cleanliness, environmental awareness, and moral responsibility within the framework of Islamic teachings. The observations revealed that the Waste Bank activities are implemented through several main stages, namely the sorting of organic and inorganic waste by students, the collection of waste at designated locations, the weighing of waste by officers or program managers, and the recording of waste savings in the students' saving system. These activities are conducted regularly and involve the active participation of students, teachers, and program administrators. In practice, students have gradually become accustomed to bringing their own food and beverage containers as an effort to reduce plastic waste, indicating behavioral changes oriented toward environmental awareness. From the perspective of Islamic Environmental Education, the observations also showed the integration of Islamic values in the implementation of the program. Teachers and supervisors frequently relate cleanliness activities to Islamic concepts that regard cleanliness as part of faith and emphasize human responsibility as khalifah (stewards) on earth. The values of amanah (trustworthiness), mīzān (balance), and the prohibition against causing

destruction (*fasād*) are indirectly instilled through habituation and guidance in daily activities within the madrasah environment. In addition, the madrasah environment supports the implementation of the program by providing facilities such as separated waste bins and information boards related to environmental cleanliness. However, the observations also indicated that the consistency of student participation still varies, particularly when there is no direct supervision from teachers or program administrators. This finding suggests that the internalization of Islamic environmental education values through the Waste Bank Program is still at the habituation stage and has not yet fully developed into independent awareness among all students.

Overall, the observational findings demonstrate that the Waste Bank Program at MAN 2 Deli Serdang has functioned as an effective medium of Islamic environmental education in fostering students' initial awareness of the importance of maintaining cleanliness and environmental sustainability. Nevertheless, continuous reinforcement of Islamic values internalization is still necessary so that the program does not merely remain a routine activity, but evolves into a character trait and a way of life for the entire madrasah community. Based on interviews conducted with five informants, namely the principal, vice principal, Islamic Religious Education teacher, OSIM chairman, and students, the data obtained indicate that the implementation of the Waste Bank Program at MAN 2 Deli Serdang is not only oriented toward environmental management, but also contains Islamic educational values closely related to Islamic ecotheology. These findings are consistent with the previous observations, which showed an integration between waste management activities and the development of environmental awareness based on Islamic values. The principal stated that the Waste Bank Program is part of the effort to build a clean and Islamic madrasah culture: *"We consider the Waste Bank Program as part of students' character building. We want students not only to know how to dispose of waste properly, but also to understand that maintaining cleanliness is part of faith and a responsibility as khalifah on earth."* This statement indicates that the Waste Bank Program is positioned as a medium for internalizing Islamic values in students' daily lives. The vice principal explained that the program has been integrated into the madrasah activity system, although challenges remain regarding students' behavioral consistency: *"This program has been running well and is supported by facilities such as separated waste bins and a waste savings system. However, the main challenge lies in students' consistency, as some of them only behave discipline when supervised by teachers."* This statement demonstrates that the program implementation has been carried out effectively, although the internalization of values still requires further strengthening. The Islamic Religious Education teacher emphasized that the Waste Bank Program is highly relevant to Islamic ecotheological values in the learning process: *"I often relate cleanliness to Islamic concepts, such as cleanliness being part of faith, amanah, and the prohibition against damaging the earth. Through this Waste Bank Program, students can directly practice those values."* This statement reinforces that the program serves as an applicative medium for learning Islamic values. The chairman of OSIM explained the role of students in supporting the implementation of the program within the madrasah: *"We, as members of OSIM, encourage our friends to maintain cleanliness and actively participate in the Waste Bank activities. Activities such as sorting and weighing waste are quite interesting, although there are still some students who lack discipline when not supervised."* This statement indicates the important role of student organizations in supporting the program, despite the remaining challenges related to discipline. Students also shared their experiences participating in the Waste Bank Program at the madrasah: *"We have become more aware of the importance of maintaining cleanliness. Sometimes we are also reminded that this is part of Islamic teachings. But honestly, it has not completely become a habit yet; we still do it mostly because of school regulations."* This statement shows that the understanding of values has started to develop, although it has not yet fully become independent awareness. Overall, the interview findings are

consistent with the observational results, indicating that the Waste Bank Program at MAN 2 Deli Serdang has become a medium of Islamic environmental education that instills Islamic ecotheological values such as cleanliness, amanah, and responsibility. However, the process of value internalization is still at the habituation stage, requiring continuous reinforcement so that these values become deeply embedded in students' character.

3.1.2. The Internalization of Islamic Ecotheological Values through the Waste Bank Program at MAN 2 Deli Serdang

Based on the observations conducted at MAN 2 Deli Serdang, the internalization of Islamic ecotheological values through the Waste Bank Program appears to take place gradually and is integrated into the daily activities of the madrasah community. The Waste Bank Program functions not only as a technical waste management activity, but also as a medium for habituating Islamic values related to environmental awareness, cleanliness, and human responsibility toward nature. The observations revealed that Islamic ecotheological values began to be internalized through practical activities such as sorting organic and inorganic waste, collecting waste by students, and managing a waste savings system in an organized manner. Through these processes, students were guided to understand that maintaining environmental cleanliness is part of Islamic teachings, closely related to the concept of cleanliness as part of faith and the human responsibility as khalifah (stewards) on earth. These activities indirectly instill the value of amanah (trustworthiness) in preserving the environment as a trust from Allah SWT. Furthermore, the value of mīzān (balance) was also observed to be internalized through the habituation of reducing plastic waste within the madrasah environment, such as encouraging students to bring their own drinking bottles and food containers. This practice reflects efforts to maintain environmental balance by reducing waste that could damage ecosystems. Meanwhile, the value of avoiding fasād (destruction or corruption) was reflected in educational reminders provided by teachers and program managers regarding the importance of not littering and preserving the sustainability of the madrasah environment. The observations also indicated that the process of value internalization was carried out through habituation, guidance, and the exemplary behavior demonstrated by teachers and program administrators. Teachers frequently linked cleanliness-related activities with Islamic values, enabling students not only to perform the activities physically but also to understand their spiritual significance. However, the level of value internalization has not yet been fully uniform, as some students still display situational behavior, showing discipline when supervised but becoming less consistent in the absence of supervision. Overall, the observational findings demonstrate that the Waste Bank Program at MAN 2 Deli Serdang has served as a medium for internalizing Islamic ecotheological values, including aspects of tawhid, amanah, mīzān, and the prohibition of fasād. Although the internalization process has been initiated, continuous reinforcement is still required so that these values are not only understood, but also genuinely become part of the students' character and way of life in their daily activities. Based on interviews conducted with five informants, namely the principal, vice principal, Islamic Religious Education teacher, OSIM chairman, and students, the findings indicate that the internalization of Islamic ecotheological values through the Waste Bank Program at MAN 2 Deli Serdang occurs gradually through habituation, role modeling, and integration into madrasah activities. These findings are consistent with the observational results, which revealed that Islamic ecotheological values such as amanah, mīzān (balance), and the prohibition of fasād (destruction) have begun to be internalized in students' behavior, although they have not yet fully developed into permanent character traits. The principal explained that the Waste Bank Program is part of a character education strategy based on Islamic values that emphasizes human responsibility toward the environment: *"We direct this Waste Bank Program not only toward cleanliness, but also toward instilling Islamic values in students. They must understand that protecting the environment is part of Allah's trust to humans as khalifah on earth."*

This statement indicates that the internalization of Islamic ecotheological values is consciously directed through madrasah policies. The vice principal emphasized that Islamic environmental values have been integrated into routine madrasah activities, although the internalization process still requires reinforcement: *“We have provided facilities and accustomed students to sorting waste and maintaining cleanliness. Islamic values are also consistently conveyed, but not all students have yet made these practices into habits without supervision.”* This statement shows that the internalization of values is still at the stage of habituation and remains dependent on external control. The Islamic Religious Education teacher stated that the Waste Bank Program greatly assists in practically internalizing Islamic ecotheological values: *“In the learning process, I relate cleanliness to Islamic concepts such as amanah, mīzān, and the prohibition against causing destruction. Through the Waste Bank Program, students can directly practice these values within the madrasah environment.”* This statement demonstrates the integration between religious learning and environmental practice. The chairman of OSIM explained that student organizations also play a role in the value internalization process through practical activities in the field: *“We from OSIM often encourage our friends to maintain cleanliness and actively participate in the Waste Bank Program. However, some students are still only disciplined when teachers or administrators are supervising them.”* This statement indicates that the internalization of values has started to develop, although it remains situational. Students explained that they have begun to understand Islamic values through the Waste Bank activities, although these values have not yet fully become personal habits: *“We have learned that maintaining cleanliness is also part of Islamic teachings. But sometimes we still forget or feel lazy when no one reminds us.”* This statement shows that the internalization of Islamic ecotheological values has begun, although it has not yet fully developed into independent awareness. Overall, the interview findings indicate that the internalization of Islamic ecotheological values through the Waste Bank Program at MAN 2 Deli Serdang has been carried out through habituation, integrated learning, and exemplary behavior. Values such as amanah, mīzān, and the prohibition of fasād have begun to be understood and practiced by students, although continuous reinforcement is still needed so that these values truly become embedded in the students’ character and daily lives.

3.1.3. Supporting and Inhibiting Factors in the Implementation of the Waste Bank Program for Instilling Islamic Ecotheological Values at MAN 2 Deli Serdang

Based on the observations conducted at MAN 2 Deli Serdang, it was found that the implementation of the Waste Bank Program in instilling Islamic ecotheological values is influenced by various supporting and inhibiting factors that are interconnected throughout the implementation process. These factors can be observed through the dynamics of waste bank management activities, the involvement of the madrasah community, as well as the environmental facilities and culture developed within the madrasah. The observations revealed that one of the main supporting factors is the commitment of the madrasah administration to building an Islamic environmental culture. This is reflected in school policies that support the implementation of the Waste Bank Program, such as providing separated waste bins, establishing waste collection and weighing systems, and supporting routine environmental cleanliness activities. These policy supports strengthen the sustainability of the program in the daily life of the madrasah. In addition, the involvement of teachers and educational staff also serves as an important supporting factor. Teachers actively provide guidance and relate waste management activities to Islamic values such as cleanliness as part of faith, amanah (trustworthiness), and human responsibility as khalifah (stewards) on earth. Teachers’ exemplary behavior in maintaining the cleanliness of the madrasah environment also becomes a stimulus for students to participate in Waste Bank activities. Another supporting factor is the participation of students and the role of the student organization (OSIM), which actively contributes to the implementation of the Waste Bank Program. Students’ involvement in waste

sorting, collection, and weighing activities demonstrates an initial enthusiasm that supports the process of internalizing Islamic ecotheological values within the madrasah environment. On the other hand, the observations also revealed several inhibiting factors in the implementation of the program. One of the main obstacles is the inconsistency of some students' behavior in maintaining cleanliness and following Waste Bank procedures in a disciplined manner. Students tend to comply when there is direct supervision from teachers or program administrators, but become less consistent in the absence of supervision. Furthermore, limitations in continuous habituation also constitute an inhibiting factor. Although the program has been implemented, the internalization of Islamic ecotheological values is still at an early stage and has not yet fully become a deeply embedded culture among all students.

This can be seen from the persistence of behaviors such as littering and the lack of independent awareness in waste management practices. Another inhibiting factor is the limitation of comprehensive control and monitoring across all areas of the madrasah, causing the implementation of the program not to always operate optimally under all conditions and at all times. Consequently, the effectiveness of instilling Islamic ecotheological values through the Waste Bank Program has not yet been evenly distributed among all members of the madrasah community. Overall, the observational findings indicate that the implementation of the Waste Bank Program at MAN 2 Deli Serdang in instilling Islamic ecotheological values is supported by madrasah policies, the role of teachers, and the participation of students and OSIM. Nevertheless, the effectiveness of the program is still influenced by inhibiting factors such as inconsistent student behavior and the incomplete internalization of values as part of the madrasah culture. Therefore, continuous reinforcement is needed so that the program does not merely function as a routine activity, but truly develops into an ecological character based on Islamic values. Based on interviews conducted with five informants, namely the principal, vice principal, Islamic Religious Education teacher, OSIM chairman, and students, it was found that the implementation of the Waste Bank Program in instilling Islamic ecotheological values at MAN 2 Deli Serdang is influenced by interconnected supporting and inhibiting factors. These findings are consistent with the observational results, which indicate that the success of the program is supported by madrasah policies, teachers' roles, and student participation, although it still faces challenges related to behavioral consistency and the incomplete internalization of values. The principal emphasized that the main supporting factor for the success of the program is the institution's commitment to building an environmentally based Islamic culture: *"We fully support this Waste Bank Program because it is part of the madrasah's vision to develop students' environmental awareness and character. We provide the facilities, and we also integrate the activities with Islamic values such as amanah and cleanliness as part of faith."* He also acknowledged that the main challenge still lies in habituating students to behave consistently in their daily lives. The vice principal explained that facilities and policy support are important factors, although supervision remains a challenge in the implementation of the program: *"The supporting factors are clearly the facilities and the madrasah's program support. However, the challenge is that not all students remain disciplined without direct supervision, so strengthening habituation is still necessary."*

The Islamic Religious Education teacher stated that the integration of Islamic values into the learning process is one of the main supporting factors in the internalization of Islamic ecotheological values: *"I always relate cleanliness to Islamic values such as amanah, mīzān, and the prohibition against damaging the environment. This helps students understand that the Waste Bank Program is not merely an ordinary activity, but part of Islamic teachings."* However, he also added that changes in students' behavior are still occurring gradually. The chairman of OSIM explained that the role of the student organization greatly supports the implementation of the program, although there are still challenges related to peer discipline: *"OSIM helps encourage*

students to maintain cleanliness and actively participate in the Waste Bank Program. However, there are still some students who are less concerned if there are no teachers or administrators reminding them.” This statement indicates that peer influence and supervision remain important factors in the implementation of the program. Students expressed that they receive support from the school and teachers, although they still require encouragement to maintain behavioral consistency: *“We are supported with facilities and reminded by teachers to maintain cleanliness. But sometimes we still forget or feel lazy when no one is supervising us.”* This statement demonstrates that the internalization of values is still at the habituation stage and has not yet fully become personal awareness. Overall, the interview findings indicate that the main supporting factors in the implementation of the Waste Bank Program for instilling Islamic ecotheological values at MAN 2 Deli Serdang include the madrasah’s commitment, facility support, the role of teachers, and the involvement of OSIM and students. Meanwhile, the dominant inhibiting factors are students’ inconsistent behavior and the still limited internalization of values, which require reinforcement through continuous habituation and supervision. These findings are consistent with the observational results, which show that the program has been implemented but is still in the process of strengthening an Islamic environmental culture.

3.2. DISCUSSION

3.2.1. Implementation of the Waste Bank Program from the Perspective of Islamic Environmental Education

The findings of the research at MAN 2 Deli Serdang show that the Waste Bank Program not only functions as an environmental management system but also as a medium for internalizing Islamic ecotheology values, which include the values of cleanliness, trustworthiness (*amanah*), *mīzān* (balance), and the prohibition of *fasād* (destruction). These findings can be analyzed and compared with various previous research results, both those that are relevant and those that are less directly relevant, to strengthen the scientific position of this study. Research (Ibrahim, Razak, Asmawi, & Sarkawi, 2024) It shows that the waste bank program is effective in increasing environmental awareness and environmentally friendly behavior among students through habituation and active participation. These results are in line with the findings at MAN 2 Deli Serdang, which showed changes in student behavior, such as the habit of bringing their own food containers and involvement in sorting and weighing waste. This reinforces that a participation-based approach in the waste bank program can gradually develop ecological awareness. In addition, research (kahfi & Qonitah, 2025) From the perspective of Islamic education, it shows that the value of cleanliness as part of faith and the concept of *khalifah fil ardh* can serve as a basis for shaping students' character. This finding is relevant to research results in madrasahs, where teachers actively connect waste bank activities with Islamic values. Thus, the waste bank program functions as a contextual medium to transform Islamic theological values into the practical life of students. However, research (Rekan & Mokhtar, 2025) It also shows that the internalization of environmental values is often still at the stage of knowledge and habituation, not yet fully an internal awareness. This finding is very much in line with the conditions at MAN 2 Deli Serdang, where students still exhibit situational behavior, namely being disciplined when supervised but less consistent when there is no supervision. This indicates that the process of internalizing Islamic ecotheology values still requires continuous reinforcement. On the other hand, there is research (Husna & Adrian, 2025) which is less directly relevant to the context of Islamic eco-theology, such as studies on waste banks that focus only on economic aspects and waste management without relating them to spiritual values. Compared to the findings of this research, there is a fundamental difference, namely that at MAN 2 Deli Serdang, the waste bank is not only understood as an environmental economic system, but also as a medium for religious-ecological character education.

This indicates an expansion of the meaning of the waste bank program from merely technical aspects to spiritual and pedagogical aspects.

Furthermore, (Kirin & Kariman, 2026) emphasizes that humans as caliphs have moral and spiritual responsibilities in maintaining the balance of nature (*mīzān*) and preventing corruption (*fasād*). The findings of this study show that these values have been integrated into students' daily activities through habituation in the madrasah environment. However, its implementation is still at the initial stage of internalization and has not fully become an established character. This indicates a gap between the theoretical concept of Islamic ecotheology and its practical implementation in the field. Overall, the results of this discussion indicate that the research findings reinforce previous studies that emphasize the effectiveness of waste bank programs in environmental education, while also expanding them with a new dimension, namely the internalization of Islamic ecotheology values. Thus, this research provides an important contribution in integrating environmental education and Islamic values in the context of madrasahs, although continuous strengthening is still needed for these values to truly become the culture and character of the students.

3.2.2. Internalization of Islamic Ecotheology Values through the Waste Bank Program

The research findings at MAN 2 Deli Serdang show that the internalization of Islamic ecotheology values through the Waste Bank Program occurs gradually through habituation, teacher role modeling, and integration into madrasah activities. The values internalized include *amanah* (trustworthiness), *mīzān* (balance), and the prohibition of *fasād* (corruption/damage), although the level of internalization has not yet fully become the students' independent awareness. These findings can be analyzed by comparing various relevant and non-relevant journal studies to strengthen the scientific position of the research. Research (Ramli, 2026) It shows that the waste bank program is effective in shaping environmental awareness and environmentally caring behavior through the approach of habituation and active student participation. The research results are in line with the findings at MAN 2 Deli Serdang, where students are directly involved in sorting, collecting, and weighing waste and begin to show behavioral changes such as reducing plastic use. This indicates that the experiential learning approach in environmental programs can gradually shape ecological awareness. From the perspective of Islamic education, the study (Iskandar, 2022) It also emphasizes that the values of cleanliness, trustworthiness, and human responsibility as caliphs are important foundations in Islamic-based environmental education. This study is relevant to research findings that show that teachers actively relate waste bank activities to Islamic ecotheology values. Thus, the waste bank program serves as a contextual medium to transform Islamic theological values into real practices in the school environment. However, research (Trisnawati, 2025) It also shows that the internalization of environmental values in students is often still at the cognitive and habituation stages, and has not yet reached a stage of consistent character. This finding is very much in line with the conditions at MAN 2 Deli Serdang, where students still exhibit situational behavior, being disciplined when supervised but less consistent when there is no supervision.

This indicates that the process of internalizing Islamic ecotheology values still requires reinforcement through a more sustainable habituation system. On the contrary, research (Mustofa, Nurhasan, Farida, Zahra, & Nurseha, 2025) which is less directly relevant to the focus of Islamic ecotheology, namely the study of waste banks that emphasizes more on the aspects of the circular economy and waste management without linking to spiritual dimensions or religious values. Compared to the findings of this research, there appears to be a difference in approach, where the waste bank at MAN 2 Deli Serdang is not only understood as an environmental management system but also as a medium for religious-ecological character education based on Islamic values. This indicates an expansion of the meaning of the waste bank program towards the integration of spiritual and ecological values. Furthermore, (Suraijjah, Rusdiah, & Surawardi, 2026) emphasizing

that humans as caliphs have moral and spiritual responsibilities in maintaining the balance of nature (mīzān) and preventing environmental destruction (fasād). The findings of this study indicate that this concept has been implemented through concrete activities such as reducing plastic waste, waste-saving systems, and habituating cleanliness behavior. However, this implementation is still at the early stage of internalization, and thus has not yet fully become a culture embedded in the students themselves. Overall, the results of this discussion indicate that the research findings reinforce previous studies emphasizing the effectiveness of waste bank programs in environmental education, while also providing new contributions in the integration of Islamic eco-theology values into madrasah education practices. Thus, this research not only strengthens the relevant literature but also develops a new perspective that waste bank-based environmental education can serve as a strategic medium for internalizing Islamic spiritual values, although continuous reinforcement is still needed to ensure that these values truly become part of the students' character.

3.2.3. Supporting and Inhibiting Factors in the Implementation of the Waste Bank Program in Instilling Islamic Ecotheology Values

The research results at MAN 2 Deli Serdang indicate that the implementation of the Waste Bank Program in instilling Islamic eco-theology values is influenced by supporting factors such as the commitment of the madrasa, facility support, the role of teachers, as well as the involvement of the student council (OSIM) and students, and inhibiting factors such as inconsistent student behavior, weak supervision, and the suboptimal internalization of values as the madrasa culture. These findings can be examined through various relevant and non-relevant journal literatures to strengthen the scientific analysis. Research (Afandi, Mardiyah, Ashfaq, & Saud, 2024) This shows that the success of the bank waste program is largely determined by institutional support, the availability of infrastructure, and the active participation of school residents in environmental management activities. These findings are in line with the results of this study, where the commitment of the madrasah in providing facilities such as separated trash bins, waste savings systems, and the integration of cleanliness activities is a key factor in the successful implementation of the program. In addition, the involvement of teachers and the Student Council (OSIM) also strengthens the effectiveness of program implementation, as found in various school-based environmental education studies. From the perspective of Islamic education, the study (Ginting, 2025) emphasizes that the exemplary behavior of teachers and the integration of Islamic values in learning are key factors in the internalization of students' moral and spiritual values. This is highly relevant to research findings at MAN 2 Deli Serdang, where Islamic Religious Education teachers actively link concepts of cleanliness, trustworthiness, mīzān (balance), and the prohibition of fasād (destruction) with the practice of waste banks. Thus, the waste bank program not only functions as an environmental activity but also as a medium for the transformation of Islamic ecotheological values in students' lives. However, research (Muttaqin & Sulaeman, 2026) It also shows that the main challenge in implementing environmental programs in schools is the low consistency of student behavior and dependence on external supervision. This finding is very much in line with the conditions at MAN 2 Deli Serdang, where students still display situational behavior, meaning they are disciplined when supervised but less consistent when there is no supervision. This indicates that the process of internalizing values is still at the habituation stage and has not reached the stage of inherent character.

Meanwhile, there is also research (Sabtina & Mahariah, 2025) The focus of Islamic ecotheology, namely the study of waste banks, emphasizes more on the aspects of circular economy and waste management without relating to spiritual dimensions and religious values. Compared to the findings of this study, there is a noticeable difference in approach. In this study, waste banks are not only understood as instruments for waste and economic management, but also as a medium for religious-ecological character education based on Islamic values. This indicates an

expansion of the meaning of the program from technical aspects to spiritual and pedagogical aspects. Furthermore, the concept of Islamic ecotheology according to (Ubaidillah, Islami, Ni'mah, & Mutmainah, 2026) emphasizing that humans as caliphs have a moral responsibility to maintain the balance of nature (mīzān) and prevent environmental damage (fasād). Research findings show that this concept has been implemented through concrete activities such as waste sorting, reducing plastic use, and waste savings systems. However, its implementation is still gradual and has not fully become a deeply rooted madrasa culture, indicating a gap between theoretical concepts and field practice. Overall, this discussion shows that the research findings reinforce the results of previous relevant studies regarding the effectiveness of waste bank programs in environmental education, while also expanding the study by incorporating the dimension of Islamic ecotheology. On the other hand, this study also highlights limitations that still occur in practice, especially concerning the consistency of student behavior and the strengthening of value internalization. Therefore, a sustainable strategy is needed so that the waste bank program not only becomes a routine activity but truly shapes an ecological culture based on Islamic values in the madrasa environment.

4. CONCLUSION

Based on the findings, it can be concluded that the implementation of the Waste Bank Program at MAN 2 Deli Serdang has been carried out in a structured manner and functions as an Islamic environmental education medium that integrates Islamic ecotheology values, such as amanah (trustworthiness), mīzān (balance), and the prohibition of fasād (destruction). This program not only focuses on waste management but also serves as a means of cultivating students' religious-ecological character through habituation, teacher role modeling, and integration into madrasah activities. However, the internalization of values has not fully become students' independent awareness, as it is still situational and dependent on supervision. In general, the program is supported by madrasah policies, facilities, the role of teachers, and the Student Council (OSIM), but it still faces challenges in the form of inconsistent student behavior and the suboptimal development of an Islamic environmental culture. Therefore, continuous strengthening is needed so that the values of Islamic eco-theology can be fully internalized into the character of learners.

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