RESEARCH JOURNAL ON TEACHER PROFESSIONAL DEVELOPMENT
E-ISSN : 2988-0432

Beyond Classroom Learning: *Ro'an* as an Experiential Pedagogy for Prospective Teachers in Developing Environmental Character within *Pesantren*

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DOI: https://doi.org/10.21580/rjtpd.v4i02.34019

Abstract : Declining public engagement with environmental issues highlights the need for educational approaches that cultivate environmental responsibility through sustained, contextually embedded practices. This study investigates the role of *Ro'an*, a collective cleaning tradition in *pesantren*, in shaping the environmental care character of students at *Pondok Pesantren* Darul Ma'arif Kaplongan, Indramayu, Indonesia. A mixed-methods design was employed, with a quantitative survey as the primary strand and qualitative observation and documentation as supporting evidence. Survey data were collected from 214 male residential students and analyzed using simple linear regression, t-testing, and the coefficient of determination (R^2). The findings indicate that both the implementation of *Ro'an* and students' environmental care character were at a good level. More importantly, *Ro'an* demonstrated a positive and statistically significant association with environmental care character, as evidenced by the regression coefficient ($\beta = 0.611$), $t = 9.132$, and $p < 0.001$. The model explained 28.2% of the variance in students' environmental care character ($R^2 = 0.282$), indicating a meaningful but non-exclusive contribution of the tradition to environmental character formation. These findings suggest that *Ro'an* should be understood not merely as a routine cleaning activity but as a form of habituated character education that connects collective religious life with environmental responsibility. The study contributes to Islamic education research by demonstrating how indigenous *pesantren* practices can function as informal pedagogical mechanisms for environmental character formation. Practically, *pesantren* administrators should institutionalize *Ro'an* through systematic scheduling, participation, supervision, and reflective reinforcement, while future research should examine complementary determinants, including educator role modelling, family background, institutional culture, and students' environmental knowledge.

Keywords : *ro'an* tradition; environmental care character of *santri*; *pesantren*

Abstrak **:** *Menurunnya kepedulian masyarakat terhadap isu lingkungan menunjukkan perlunya pendekatan pendidikan yang mampu menanamkan karakter peduli lingkungan melalui praktik yang berkelanjutan dan kontekstual. Penelitian ini bertujuan menganalisis pelaksanaan tradisi Ro'an sebagai praktik pembiasaan serta menguji pengaruhnya terhadap karakter peduli lingkungan santri di Pondok Pesantren Darul Ma'arif Kaplongan, Indramayu, Indonesia. Penelitian menggunakan pendekatan mixed methods, dengan survei kuantitatif sebagai strand utama dan observasi serta*

dokumentasi sebagai strand pendukung. Data kuantitatif diperoleh melalui angket yang melibatkan 214 santri mukim laki-laki dan dianalisis menggunakan regresi linear sederhana, uji-t, dan koefisien determinasi (R^2). Hasil penelitian menunjukkan bahwa pelaksanaan tradisi Ro'an dan karakter peduli lingkungan santri berada pada kategori baik. Secara lebih spesifik, tradisi Ro'an memiliki hubungan positif dan berpengaruh signifikan terhadap karakter peduli lingkungan, yang ditunjukkan oleh koefisien regresi sebesar 0,611, nilai t sebesar 9,132, dan signifikansi $p < 0,001$. Nilai R^2 sebesar 0,282 menunjukkan bahwa tradisi Ro'an menjelaskan 28,2% variasi karakter peduli lingkungan santri, sedangkan 71,8% sisanya dipengaruhi oleh faktor lain. Temuan ini menunjukkan bahwa Ro'an tidak semata-mata merupakan aktivitas kebersihan kolektif, tetapi dapat berfungsi sebagai mekanisme pembiasaan pedagogis dalam membentuk karakter peduli lingkungan melalui praktik, partisipasi, dan tanggung jawab bersama. Penelitian ini berkontribusi pada pengembangan kajian pendidikan Islam dengan menunjukkan bahwa tradisi khas pesantren dapat menjadi medium pendidikan karakter lingkungan yang berbasis pengalaman dan pembiasaan. Secara praktis, pengelola pesantren perlu menginstitusionalisasikan Ro'an melalui penjadwalan, pembagian tanggung jawab, pengawasan, dan penguatan reflektif yang sistematis. Penelitian selanjutnya perlu menguji faktor komplementer, seperti keteladanan ustadz, budaya kelembagaan, pengetahuan lingkungan, dan latar belakang keluarga.

Kata kunci *: tradisi ro'an; karakter peduli lingkungan santri; pesantren*

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INTRODUCTION

At present, public concern for various environmental issues tends to be declining, influenced by less-than-optimal efforts to cultivate environmental care character in daily life. The world faces increasingly complex environmental problems such as climate change, environmental pollution, and deforestation. Data from the World Health Organization show that approximately 91% of the world's population lives in areas with unhealthy air quality, while Indonesia produces around 19.45 million tons of waste annually (Hidayat, Ramli, & Guntara, 2025). Therefore, cultivating environmental care character through education has become critically important, including in non-formal institutions such as *pesantren* (Aziz, Sastradiharja, & Tasbih, 2024).

Pondok Pesantren is the oldest Islamic educational institution in Indonesia, functioning not only as a center for transmitting religious knowledge but also as a space for shaping *santri* character through tradition, culture, and collective living habits (Sandy, 2025). One distinctive tradition deeply rooted in *pesantren* life is the *Ro'an* tradition, a collective mutual-cooperation work activity carried out by *santri* to maintain the cleanliness, tidiness, and sustainability of the *pesantren* environment (Saini, 2020). This tradition covers various activities, such as cleaning dormitories, mosques, courtyards, and drainage channels, and maintaining public facilities, thereby integrating the values of mutual cooperation and cleanliness as an inseparable part of *pesantren* culture.

Cleanliness in Islam is regarded as part of faith, while mutual cooperation aligns with the Qur'anic principle of mutual help affirmed in QS. Al-Ma'idah verse 2. Environmental care character, from the perspective of environmental psychology,

encompasses cognitive, affective, and conative dimensions (Kollmuss & Agyeman, 2002). In the *pesantren* context, these values are embodied in the *Ro'an* tradition: *santri* are not merely instructed to maintain cleanliness but are actively involved in collective activities that foster a sense of responsibility and environmental concern (Rahmania, Antika, Hikmah, Widodo, & Syuaib, 2025). Although several studies show that cleanliness and mutual-cooperation traditions contribute positively to *santri* character formation, studies that specifically position *Ro'an* as a distinctive *pesantren* tradition and quantitatively analyze its influence on *santri*'s environmental care character remain relatively limited (Safei, 2023).

The novelty of this study lies in its focus on positioning *Ro'an* as the main variable analyzed empirically in relation to *santri*'s environmental care character, particularly within the context of a *pesantren* that blends traditional and modern educational models, in an underexplored region. *Pondok Pesantren* Darul Ma'arif Kaplongan, Indramayu, was selected as the research location because it is one of the *pesantren* that consistently implements the *Ro'an* tradition as part of *santri*'s daily life, yet no scientific study has specifically examined whether and to what extent this tradition actually influences *santri*'s environmental care character. This study is also relevant to the Sustainable Development Goals (SDGs), particularly Goal 4 (quality education) and Goal 13 (climate action).

This study aims to: (1) describe the implementation of the *Ro'an* tradition at *Pondok Pesantren* Darul Ma'arif Kaplongan, Indramayu; (2) analyze *santri*'s Environmental Care Character; and (3) analyze the influence of the *Ro'an* tradition on *santri*'s Environmental Care Character. The findings are expected to provide empirical contributions to the development of a contextual model for cultivating environmental care character appropriate to *pesantren* culture.

LITERATURE REVIEW

Character education in Indonesian Islamic boarding schools (*pesantren*) has increasingly been examined through the lens of institutional culture rather than formal curriculum alone. Arifin, Imron, Supriyanto, and Arifin (2022) showed that the distinctive daily culture of *Pondok Pesantren* Nurul Hakim Kediri including its routines, symbols, and communal habits functions as a deliberate vehicle for shaping *santri* character, operating alongside, and at times more powerfully than, classroom instruction. In a similar vein, Sandy (2025) described how the internalization of character values at *Pondok Pesantren* Al-Hikam Kalisari is achieved primarily through habituation and exemplary modeling by kiai and senior *santri* rather than explicit teaching. Khotimah, Taembo, and Hipni (2025) extended this discussion to the specific domain of sustainability, arguing that eco-*pesantren* initiatives require character formation to be embedded within everyday institutional practice if environmental values are to be sustained over time. Similarly, Aziz, Sastradiharja, and Tasbih (2024) showed that Qur'an-based environmental education programs embedded in the daily routines of *pesantren* effectively cultivated a healthier, more environmentally conscious lifestyle among *santri*, reinforcing the view that institutional culture, rather than formal curriculum alone, is central to shaping environmentally oriented character. Taken

together, these studies establish that *pesantren* traditions not only formal religious instruction are a legitimate and effective unit of analysis for character-education research, which is the premise on which the present study's focus on the *Ro'an* tradition is built

A smaller but growing body of research has examined the *Ro'an* tradition directly. Saini (2020) found that the routine practice of *Ro'an* (*kerja bakti*) at *Pondok Pesantren* Al-Qomar Wahid Patianrowo strengthens *santri*'s social character, particularly cooperation and solidarity. Zahid, Bakhri, Ikayanti, and Hijazi (2023) documented how *Ro'an* builds ecological awareness among *santri* by linking cleanliness practice to religious obligation. Rahmania, Antika, Hikmah, Widodo, and Syuaib (2025) and Zidni, As, and Anwar (2025) similarly described *Ro'an* as a vehicle for cultivating environmentally responsible attitudes through repeated, supervised communal labor. Most recently, Alfiansah (2025), using a qualitative case study of *Ro'an* at *Pondok Pesantren* Annur Lembah Kemuning, identified caregiver modeling, habituation and discipline, and educative persuasion as the principal strategies through which *Ro'an* shapes *santri*'s moral knowing, moral feeling, and moral action toward the environment. However, this body of work is almost entirely qualitative and descriptive; none of these studies has quantified the strength of *Ro'an*'s influence on environmental care character or combined survey measurement with field observation, a gap the present study addresses.

Beyond the *Ro'an* tradition itself, several studies have highlighted the broader role of Islamic religious education in cultivating environmental awareness. Mawardi et al. (2024) found that Islamic education teachers at *Pondok Pesantren* Modern ZIIS Cilongok play a vital role in shaping *santri*'s environmental care character through scheduling cleaning duties, providing sanitation facilities, and direct guidance and motivation. Thoyibah and Fakhruqi (2025) argued that Islamic religious education (PAI) can be positioned as a strategic channel for raising children's and adolescents' awareness of climate change, while Hidayat (2024), drawing on Ziauddin Sardar's thought, discussed environmental stewardship as an integral, rather than peripheral, dimension of Islamic teaching. Safei (2023) further described how boarding schools can deliberately cultivate an environmentally friendly institutional culture through policy, habituation, and religious framing simultaneously. These studies converge on the view that religious meaning-making is a key mechanism through which environmental behavior is instilled in *pesantren* settings, reinforcing the theological framing of cleanliness discussed in the Introduction.

At a theoretical level, Kollmuss and Agyeman (2002) note that environmental knowledge and awareness do not automatically translate into pro-environmental behavior, a gap shaped by internal factors (values, attitudes, emotional involvement) and external factors (institutional structures, social norms, economic constraints); this gap model is relevant for interpreting the discrepancy between the affective and behavioral indicators reported later in this study. Ones, Wiernik, Dilchert, and Klein (2015) similarly define pro-environmental behavior as action that minimizes harm to, or benefits, the natural environment, and emphasize that such behavior is jointly shaped by individual disposition and situational context. This dynamic is illustrated in practice by participatory cleanliness programs in *pesantren* settings: Mujito et al. (2025) reported that a *santri*-participation-based

cleanliness program at *Pesantren* Al Barqiyah Sukamakmur improved both the physical condition of the *pesantren* and *santri*'s environmental mindset, while Yusuf and Muhammadiah (2025) found that experience-based character education for environmental care and *gotong royong* at the primary-school level was constrained by students' limited understanding and inadequate facilities, underlining that structural support matters as much as programming. Sanusi (2025) reported a positive relationship between environmental awareness and pro-environmental behavior among adolescents, lending further support to the awareness-behavior link examined in this study. At the policy level, Alisjahbana and Murniningtyas (2018) situate these micro-level findings within Indonesia's broader Sustainable Development Goals agenda, underscoring that community-based, culturally embedded interventions such as *Ro'an* are consistent with, and can contribute to, national sustainability targets.

METHOD

This study employed a mixed-methods approach with an embedded, quantitative-dominant design (Sugiyono, 2019). The dominant strand was a quantitative explanatory survey, using a questionnaire as the primary data collection instrument, aiming to examine the influence of the *Ro'an* Tradition (X) as the independent variable on Environmental Care Character (Y) as the dependent variable. A supporting qualitative strand, consisting of field observation and documentation, was embedded within this design and carried out throughout the research period; rather than being analyzed as an independent qualitative strand, this qualitative data was used to triangulate, contextualize, and enrich the interpretation of the questionnaire results, and is reported descriptively in the Results section. A mixed-methods design was selected because a purely quantitative survey can measure the statistical strength of the *Ro'an* tradition's influence on environmental care character but cannot, by itself, verify whether the tradition is genuinely implemented as intended or capture the contextual nuances of how *santri* practice it in daily *pesantren* life, whereas a purely qualitative design would not allow this influence to be measured and generalized across the sample. Embedding a qualitative strand within the dominant quantitative design therefore allowed the survey findings to be corroborated and contextualized without compromising the study's primary aim of measuring statistical influence.

The study was conducted at *Pondok Pesantren* Darul Ma'arif Kaplongan, Indramayu Regency, West Java, during the even semester of the 2025/2026 academic year. The study population consisted of all 461 male resident *santri*, with a sample of 214 respondents selected through simple random sampling based on the Slovin formula with a 5% margin of error (Santoso, 2023). Data were collected through questionnaires, observation, and documentation. The instrument used a four-point Likert scale covering five indicators for each variable: the *Ro'an* Tradition (active participation, consistency of implementation, collaboration and teamwork, internalization of cleanliness values, and compliance with *pesantren* rules) and Environmental Care Character (attitude toward maintaining

cleanliness, awareness of environmental damage, responsibility for facilities, participation in conservation, and behavioral consistency).

Data were analyzed using simple linear regression, t-test, and the coefficient of determination (R^2), preceded by normality and linearity tests (Sugiyono, 2019). Prior to data collection, the researchers obtained informed consent from all respondents, and the confidentiality of their identities and responses was maintained throughout the study. A limitation of this study is that data were collected solely through a self-administered questionnaire, which may be subject to social desirability bias, and the findings are limited to the context of a single *pesantren*, so generalization to other institutions should be made with caution. Qualitative data obtained from field observation and documentation were analyzed descriptively through the stages of data reduction, data display, and conclusion drawing/verification (Miles & Huberman, as cited in Sugiyono, 2019); the resulting descriptive account was used to triangulate and contextualize the quantitative survey findings rather than to generate an independent set of qualitative themes.

The research framework illustrates the relationship between the *Ro'an* Tradition (X) as the independent variable and Environmental Care Character (Y) as the dependent variable, as presented in Figure 1.

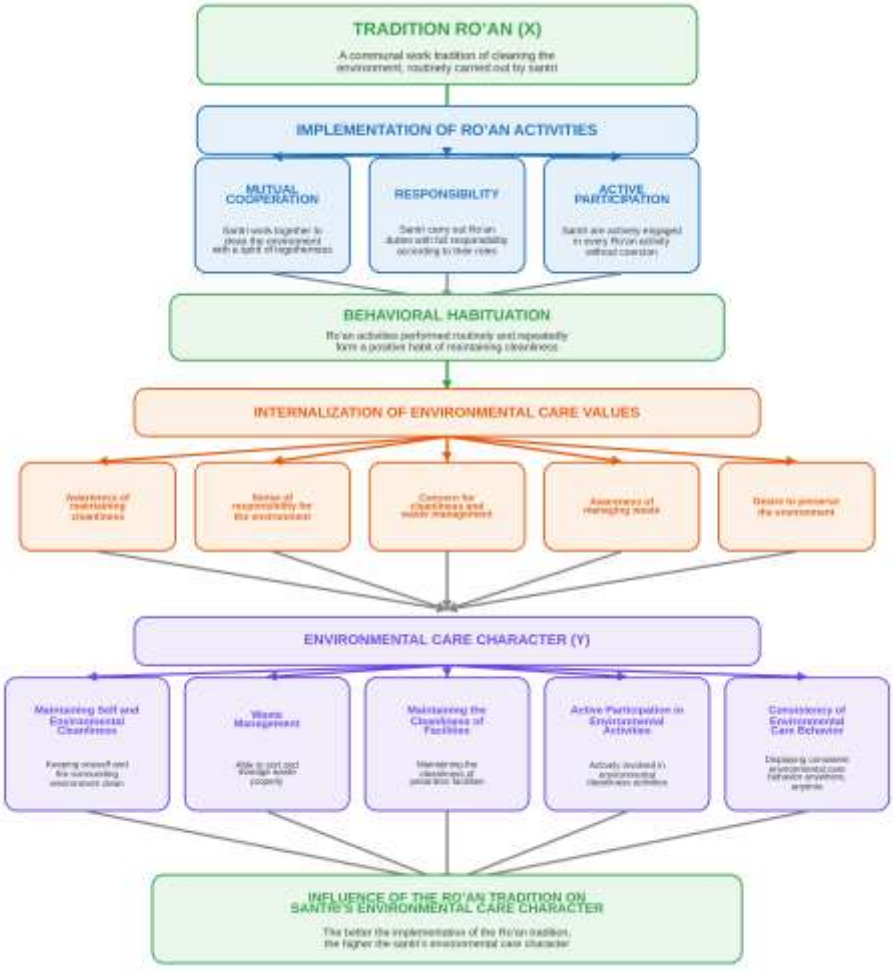

Fig. 1. Conceptual Framework

RESULTS

Implementation of the *Ro'an* Tradition in *Pondok Pesantren Darul* Ma'arif

In addition to the questionnaire data, field observation and documentation were carried out throughout the research period to obtain a more complete picture of how the *Ro'an* tradition is actually implemented at *Pondok Pesantren* Darul Ma'arif Kaplongan. The observation results show that the *Ro'an* tradition has long been practiced as part of the *pesantren*'s culture of instilling clean-living habits, mutual cooperation, and shared responsibility for the cleanliness of the *pesantren* environment. The *pesantren* management understands this tradition not merely as an environmental cleaning activity, but as a medium of character education intended to cultivate values of togetherness, discipline, responsibility, and environmental care among *santri*.

The observation was conducted by the researcher over an initial observation period of 18–26 May 2026 across key *pesantren* areas involved in the *Ro'an* tradition, namely the dormitories, mosque, courtyard, and drainage channels, focusing on how the *Ro'an* tradition was implemented and on *santri*'s environmental care behavior during the activity; the subjects observed were the male resident *santri* of *Pondok Pesantren* Darul Ma'arif Kaplongan. Observation and documentation findings indicate that the *Ro'an* tradition is carried out routinely according to a schedule set by the *pesantren*. All *santri* are required to take part, with task divisions arranged by the OPDM (the *pesantren*'s student management organization) or the cleanliness division. Each group of *santri* is assigned responsibility for a specific area, such as the dormitory, courtyard, bedrooms, bathrooms, mosque, and other *pesantren* facilities. During the activity, the management and relevant divisions provide supervision and guidance to ensure that all *santri* carry out their assigned tasks properly. Implementation begins with the division of work areas and instructions on the cleaning tasks to be carried out; *santri* then clean using equipment provided by the *pesantren*, after which the management inspects the results of each group's work as a form of evaluation and as a means of building a sense of responsibility.

Beyond maintaining the cleanliness of the *pesantren* environment, the observation results show that the *Ro'an* tradition also functions as a medium through which *santri* learn cooperation, mutual assistance, discipline, and environmental concern. Through repeated habituation, *santri* are expected not only to maintain cleanliness while the *Ro'an* activity is taking place, but also to apply environmentally caring behavior in daily life, both within the *pesantren* and later in the wider community. Overall, the observation results indicate that the implementation of the *Ro'an* tradition at *Pondok Pesantren* Darul Ma'arif Kaplongan has been running well; most *santri* follow the established schedule and carry out cleaning duties according to their assigned areas, although a smaller number of *santri* still require closer supervision and coaching to strengthen participation and consistency.



Fig. 2 Field documentation of the *Ro'an* tradition implementation at *Pondok Pesantren* Darul Ma'arif Kaplongan: *santri* cleaning the *pesantren* drainage channel.

To complement the observation and documentation findings, a questionnaire on the *Ro'an* Tradition variable (X) was distributed to 214 respondents, covering five indicators: active participation, consistency of implementation, collaboration and teamwork, internalization of cleanliness values, and compliance with *pesantren* rules. Representative items for each indicator, together with the percentage of respondents who agreed or strongly agreed, are summarized in Table 1.

Table 1. Distribution of Responses on the *Ro'an* Tradition (X) Indicators (n = 214)

Indicator	Representative Item	% Agree/ Strongly Agree	Category
Active Participation	Actively involved in cleaning the *pesantren* environment	94.4%	Very Good
Active Participation	Joins *Ro'an* only when supervised by OPDM (reverse)	35.5%	Good
Consistency of Implementation	Implementation of *Ro'an* is often irregular (reverse)	55.7%	Fair
Consistency of Implementation	Often absent from *Ro'an* without a clear reason (reverse)	22.1%	Good
Collaboration & Teamwork	Often conflicts during task division (reverse)	25.7%	Good
Internalization of Cleanliness Values	Aware that *Ro'an* is important for *pesantren* cleanliness	93.9%	Very Good

Indicator	Representative Item	% Agree/ Strongly Agree	Category
Internalization of Cleanliness Values	Considers *Ro'an* merely a formality (reverse)	27.6%	Good
Internalization of Cleanliness Values	Keeps the environment clean even outside the *Ro'an* schedule	84.6%	Good
Compliance with *Pesantren* Rules	Carries out *Ro'an* as a form of obedience to *pesantren* rules	83.6%	Good
Compliance with *Pesantren* Rules	Feels that *Ro'an* is a forced burden (reverse)	12.6%	Very Good

Source: Primary questionnaire data processed, 2026

Active participation. As many as 94.4% of respondents agreed or strongly agreed that they are actively involved in cleaning the *pesantren* environment, while only 35.5% agreed that they join *Ro'an* merely because they are supervised by the OPDM management. These results indicate that *santri* participation in the *Ro'an* tradition is largely driven by internal awareness rather than external supervision alone, placing this indicator in the very good category.

Consistency of implementation. This indicator shows the most room for improvement among the five: 55.7% of respondents agreed that the implementation of *Ro'an* is often irregular, although only 22.1% admitted to frequently being absent without a clear reason. This pattern suggests that irregularity is experienced more as a scheduling or coordination issue at the institutional level than as a lack of individual discipline, placing the indicator in the fair category and highlighting a concrete area for managerial attention.

Collaboration and teamwork. Only 25.7% of respondents agreed that they often experience conflict during the division of *Ro'an* tasks, meaning that most *santri* are able to work together and accept task assignments without significant friction, reflecting the good category for this indicator.

Internalization of cleanliness values. This indicator shows the strongest results overall: 93.9% of respondents were aware that *Ro'an* is important for maintaining *pesantren* cleanliness, 84.6% reported keeping the environment clean even outside the scheduled *Ro'an* activity, and only 27.6% considered *Ro'an* to be merely a formality. Together these figures indicate that the values promoted through *Ro'an* have been internalized by most *santri* rather than experienced as an externally imposed obligation.

Compliance with *pesantren* rules. As many as 83.6% of respondents carried out *Ro'an* as a form of obedience to *pesantren* regulations, and only 12.6% felt that *Ro'an* was a forced burden. This indicates that compliance with the *Ro'an* tradition is generally experienced as a legitimate part of *pesantren* life rather than as coercion, placing this indicator in the very good category.

The Influence of the *Ro'an* Tradition on the Environmentally Conscious Character of *Santri*

Environmental Care Character is one of the character values developed at *Pondok Pesantren* Darul Ma'arif Kaplongan as part of the education and coaching of *santri*. This

value is instilled through various habituation activities in daily life, both through formal teaching and through activities within the *pesantren* environment, in line with the *pesantren*'s vision of producing *santri* who are excellent in character, adaptive, innovative, and able to contribute globally on the basis of Sunni Islamic orthodoxy. As part of the implementation of this vision, the *pesantren* management instills environmental care character through habituation programs such as keeping rooms clean, maintaining *pesantren* facilities, disposing of waste properly, saving water and electricity, and actively participating in the *Ro'an* tradition.

These observations were conducted by the researcher during the same initial observation period (18–26 May 2026) at *Pondok Pesantren* Darul Ma'arif Kaplongan, focusing specifically on *santri*'s environmental care behavior such as maintaining cleanliness, showing concern for facility damage, and caring for the surrounding environment among the male resident *santri*. Based on observations carried out throughout the research period, most *santri* have shown behavior that reflects environmental care character. This is evident in their involvement in maintaining the cleanliness of the *pesantren* environment, caring for public facilities, and taking part in the various cleanliness activities organized by the *pesantren*. In addition, the management and student supervisors routinely provide direction, supervision, and coaching so that environmentally caring behavior is not limited to specific scheduled activities but becomes a habit in *santri*'s daily life.

Nonetheless, the observation results also indicate that a smaller number of *santri* still require further coaching so that their awareness of maintaining cleanliness and environmental sustainability continues to increase. The various habituation programs applied at *Pondok Pesantren* Darul Ma'arif Kaplongan are therefore expected to build environmental care character on a sustainable basis, in line with the *pesantren*'s vision of producing a generation of *santri* who are characterful, adaptive, innovative, high-quality, and able to make a positive contribution to society based on the values of Sunni Islamic orthodoxy.



Fig. 3. Disciplinary sanction for *santri* who violate cleanliness rules, as documentation of environmental care character enforcement

To complement the observation and documentation findings, a questionnaire on the Environmental Care Character variable (Y) was distributed to the same 214 respondents, covering five indicators: attitude toward maintaining cleanliness, awareness of environmental damage, responsibility for facilities, participation in conservation, and behavioral consistency. Representative items for each indicator are summarized in Table 2.

Table 2. Distribution of Responses on the Environmental Care Character (Y) Indicators (n = 214)

Indicator	Representative Item	% Agree/ Strongly Agree	Category
Attitude Toward Cleanliness	Disposes of waste in the proper place	94.8%	Very Good
Attitude Toward Cleanliness	Maintains cleanliness of the *pesantren* environment (dormitory, room, bathroom, etc.)	93.9%	Very Good
Awareness of Environmental Damage	Considers environmental damage not a serious problem (reverse)	18.7%	Very Good
Awareness of Environmental Damage	Does not care about environmental damage (reverse)	17.3%	Very Good
Responsibility for Facilities	Uses facilities without regard for possible damage (reverse)	16.8%	Very Good
Responsibility for Facilities	Considers facility damage not their concern (reverse)	24.3%	Very Good
Participation in Conservation	Active in the cleanliness duty roster	91.6%	Very Good
Participation in Conservation	Willing to take part in communal work	90.6%	Very Good
Participation in Conservation	Joins cleaning activities only out of fear of punishment (reverse)	22.9%	Very Good
Behavioral Consistency	Stays silent when seeing a friend litter (reverse)	20.1%	Very Good

Source: Primary questionnaire data processed, 2026

Attitude toward maintaining cleanliness. As many as 94.8% of respondents agreed or strongly agreed that they dispose of waste in the proper place, and 93.9% reported maintaining the cleanliness of the *pesantren* environment, including dormitories, rooms, and bathrooms. These results place the indicator in the very good category and show that the cleanliness values promoted through *Ro'an* are reflected in *santri*'s daily attitudes.

Awareness of environmental damage. Only 18.7% of respondents considered environmental damage not to be a serious problem, and only 17.3% stated that they do not care about environmental damage. The low endorsement of these reverse-worded items indicates that most *santri* are cognitively aware that environmental degradation carries real consequences, consistent with the cognitive dimension of environmental care character.

Responsibility for facilities. As few as 16.8% of respondents agreed that they use *pesantren* facilities without regard for possible damage, and 24.3% considered facility

damage not to be their concern. The low agreement with both reverse items indicates that most *santri* treat shared *pesantren* facilities with a sense of ownership and responsibility.

Participation in conservation. This indicator shows consistently strong results: 91.6% of respondents were active in the cleanliness duty roster, 90.6% were willing to take part in communal work, and only 22.9% admitted joining cleaning activities merely out of fear of punishment. This pattern indicates that participation in environmental conservation activities is driven mainly by intrinsic motivation rather than by fear of sanction.

Behavioral consistency. Only 20.1% of respondents agreed that they stay silent when seeing a friend litter, meaning that most *santri* are willing to take some form of corrective social action rather than remaining passive, which reflects the conative dimension of environmental care character and places this indicator in the very good category.

Before testing the influence of the *Ro'an* Tradition on Environmental Care Character, prerequisite tests were carried out to ensure that the data met the assumptions required for simple linear regression analysis. The normality test using the One-Sample Kolmogorov-Smirnov Test produced a Monte Carlo Sig. (2-tailed) value of 0.208, which is greater than 0.05, indicating that the regression residuals are normally distributed. The linearity test produced a significance value of 0.000 for the Linearity component and 0.907 for the Deviation from Linearity component, indicating that the relationship between the *Ro'an* Tradition and Environmental Care Character is linear and that the prerequisite assumptions for regression analysis were satisfied.

Simple linear regression analysis produced the equation Y = 32.923 + 0.611X. The positive regression coefficient of 0.611 indicates that every one-unit increase in the *Ro'an* Tradition score is followed by a 0.611-unit increase in the Environmental Care Character score. The t-test results show a calculated t-value of 9.132 with a significance value of 0.000, which is smaller than 0.05, meaning that H0 is rejected and Ha is accepted: the *Ro'an* Tradition has a positive and significant influence on *santri*'s Environmental Care Character. The coefficient of determination (R^2 = 0.282) indicates that the *Ro'an* Tradition contributes 28.2% to *santri*'s Environmental Care Character, while the remaining 71.8% is influenced by other factors outside the scope of this study.

Table 3. Results of Simple Linear Regression Analysis

Indicator	B	Std. Error	t	Sig.
Constant	32.923	5.083	6.477	0.000
Ro'an Tradition	0.611	0.067	9.132	0.000
R^2	0.282			
Contribution	28.2%			

Source: Primary data processed, 2026

DISCUSSION

Taken together, the results presented above show that the *Ro'an* tradition at *Pondok Pesantren* Darul Ma'arif Kaplongan is implemented consistently across most indicators, that *santri*'s Environmental Care Character falls into the good-to-very-good category, and that the *Ro'an* Tradition has a positive and statistically significant influence on that character (Y

= 32.923 + 0.611X; t = 9.132; p = 0.000; R^2 = 0.282). The most important finding to emerge from the combination of observation, documentation, and questionnaire data is that this influence is not merely a statistical association but is embedded in a concrete institutional mechanism: routine scheduling, task division through the OPDM management, direct supervision, and post-activity evaluation. It is this mechanism, rather than the *Ro'an* tradition as an abstract idea, that appears to translate a collective cleaning practice into a measurable character outcome.

From a theoretical standpoint, the pattern of indicator results is consistent with the cognitive-affective-conative model of environmental behavior proposed by Kollmuss and Agyeman (2002). The cognitive dimension is reflected in *santri*'s strong awareness that environmental damage is a serious problem (81.3% disagreement with the reverse item) and that *Ro'an* is important for cleanliness (93.9% agreement); the affective dimension is reflected in the low endorsement of items describing *Ro'an* as a forced burden (12.6%) or a mere formality (27.6%); and the conative dimension is reflected in behavioral indicators such as active participation in the cleanliness roster (91.6%) and willingness to intervene when a friend litters (79.9% disagreement with the passive item). The convergence of all three dimensions toward the positive end of the scale helps explain why the regression coefficient is both positive and significant: the *Ro'an* tradition does not merely inform *santri* about environmental values, it also shapes their affective disposition and their behavioral response.

At the same time, the results reveal an instructive gap between affective commitment and behavioral consistency. While internalization of cleanliness values and compliance with *pesantren* rules both fall into the very good category, the consistency-of-implementation indicator is comparatively weaker, with 55.7% of respondents agreeing that *Ro'an* is often irregular. This gap suggests that the weakest link in the *Ro'an*-to-character pathway is not *santri*'s attitude but the institutional consistency of scheduling and coordination. Theoretically, this supports the view that habituation-based character education depends as much on the reliability of the surrounding institutional structure as on the values being taught; irregular practice risks eroding the very consistency of behavior that habituation is meant to produce, even when underlying attitudes remain positive.

These findings are consistent with, and extend, several prior studies. In line with Zahid et al. (2023), who described collective cleaning traditions in *pesantren* as a vehicle for ecological awareness built through direct experience, the present findings show that direct, hands-on involvement in *Ro'an* corresponds with high scores on the awareness and responsibility indicators of Environmental Care Character. The findings also support Saini's (2020) observation that *Ro'an* functions as a social practice strengthening cooperation and solidarity, reflected here in the low incidence of task-division conflict (25.7%). Furthermore, consistent with Khotimah, Taembo, and Hipni (2025), who positioned culture and habituation as central mechanisms of eco-*pesantren* character formation, the present study shows that a single, long-standing cultural practice can be operationalized and measured as a quantifiable predictor of character outcomes rather than treated only as a qualitative description of *pesantren* life.

Compared with Zidni, As, and Anwar (2025), who examined character cultivation through the mutual-cooperation *Ro'an* tradition at a different *pesantren*, the present study reaches a similar directional conclusion but through a different methodological lens: whereas prior studies have generally relied on qualitative or descriptive accounts of *Ro'an*, this study triangulates field observation and documentation with a 214-respondent questionnaire analyzed through simple linear regression. This triangulation allows the discussion to move beyond describing that *Ro'an* is associated with positive character outcomes toward specifying how strongly it is associated (a 28.2% contribution) and through which specific indicators (participation, internalization, and compliance) that association is strongest.

The principal novelty of this study lies in this combination of quantitative measurement and field-based qualitative description within a single, previously underexamined research site: a *pesantren* that blends classical Islamic curriculum with formal and language-based education. Rather than treating the *Ro'an* tradition as a generic descriptor of *pesantren* culture, this study isolates it as a distinct independent variable, measures its five constituent indicators separately, and statistically links it to a five-indicator character outcome, while simultaneously grounding the quantitative pattern in direct observation of how the tradition is organized and supervised on the ground. This dual approach provides a more complete account than either a purely quantitative survey or a purely qualitative case description would offer on its own, and it offers a replicable model for examining other habituation-based *pesantren* traditions in relation to specific character outcomes.

From a practical standpoint, the R^2 value of 0.282 indicates that although the *Ro'an* Tradition contributes meaningfully to *santri*'s Environmental Care Character, the majority of variance (71.8%) remains explained by factors outside the scope of this study, such as the role modeling of teachers and *pesantren* staff, family upbringing prior to entering the *pesantren*, peer influence, and the broader curriculum of religious and moral education. This suggests that strengthening *Ro'an* alone is unlikely to be sufficient; *pesantren* administrators seeking to build environmental care character should treat *Ro'an* as one component within a wider, coordinated character-education strategy, while specifically addressing the scheduling and coordination weaknesses identified in the consistency-of-implementation indicator, since this is the aspect of *Ro'an* implementation most clearly within institutional control.

CONCLUSION

Based on the research results and discussion, it can be concluded that: (1) the implementation of the *Ro'an* Tradition at *Pondok Pesantren* Darul Ma'arif Kaplongan, Indramayu has been running as a routine activity involving active *santri* participation, consistency of implementation, collaboration and teamwork, internalization of cleanliness values, and compliance with *pesantren* rules and values; (2) *santri*'s Environmental Care Character falls into the good category, reflected in attitudes of maintaining cleanliness, awareness of environmental damage, responsibility for facilities, participation in

environmental conservation, and behavioral consistency; (3) the *Ro'an* Tradition has a positive and significant influence on *santri*'s Environmental Care Character, with the regression equation Y = 32.923 + 0.611X, a calculated t-value of 9.132, significance of 0.000 < 0.05, and an R^2 value of 0.282, indicating a contribution of 28.2%.

Recommendations for the *pesantren* include strengthening the planning and scheduling of *Ro'an* activities, improving periodic mentoring and evaluation, and developing supporting environmental programs such as waste management and greening. Future researchers are encouraged to examine other factors contributing to the remaining 71.8% of *santri*'s Environmental Care Character, such as the role modeling of teachers, family background, and environmental management policies.

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