

**ECOLOGY INTEGRATION IN PESANTREN CURRICULUM  
(A CASE STUDY IN ISLAMIC SENIOR HIGH SCHOOL OF AL-AMIEN 1  
PRAGAAN SUMENEP)**

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Abstract

This study analyzes the integration design of ecology in pesantren curriculum. It is a case study conducted in a pesantren based girls-only school of Islamic Senior High School of Al-Amien 1 Pragaan, Sumenep. It employed observation supported by interviews and documentation. Data was analyzed using data condensation, data presentation and drawing conclusion. The result shows that the integration is designed through the ecological literacy process. This process develops student's ecological awareness and shapes ecological characters. The school aims to internalize ecological wisdom by encouraging students to capture the divine names (meta-cosmic) that manifest in nature as a whole, nurturing students to be humans as a totality of nature and fostering them to be aware of that human are the epitome of the nature (microcosm) and the universe (macrocosm). This endeavor made this school became the only Islamic private school that won the Adiwiyata National Award on 2019.

*Keywords: ecology, curriculum, pesantren*

Abstrak

Tulisan ini bertujuan untuk menganalisis rancangan kurikulum integrasi ekologis di pesantren. Pendekatan yang digunakan adalah kualitatif lapangan, jenis studi kasus. Subjek dalam penelitian ini adalah kurikulum di Madrasah Aliyah Al-Amien 1 Pragaan, Kabupaten Sumenep, sebuah sekolah berbasis pesantren khusus untuk putri. Metode pengumpulan data yang utama dalam penelitian ini adalah observasi, diperkuat wawancara dan dokumentasi. Analisa data yang digunakan kondensasi data, penyajian data dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa bentuk rancang bangun ekologis pesantren di lembaga tersebut adalah melalui proses melek ekologis. Melalui proses ini, kesadaran ekologis tertanam dan karakter ekologis terbentuk dalam diri siswa. Peserta didik di sekolah ini diharapkan dapat menangkap semua nama ilahi (metakosmos) yang menampakkannya dirinya pada alam sebagai keseluruhannya. Lembaga ini mencetak anak didiknya menjadi manusia sebagai totalitas alam dan menyadarkan mereka bahwa manusia adalah miniatur alam atau mikrokosmos dan alam besar adalah makrokosmos. Dengan demikian kearifan ekologis menjadi terinternalisasi pada diri mereka. Upaya ini mendatangkan prestasi nasional. Lembaga ini menjadi satu-satunya madrasah aliyah swasta yang mendapatkan penghargaan Adiwiyata Nasional pada tahun 2019.

*Kata kunci: ekologi, kurikulum dan pesantren*

## **INTRODUCTION**

The global crisis that hit the world, according to Fritjof Capra, was due to the hoarding of tens of thousands of nuclear weapons and their radioactive risks. The rapid industrial technology also has a heavy impact on air pollution and is one of the causes of damage to ecological systems. In addition, Masaru Emoto argues that the reduced energy possessed by nature becomes a considerable threat to life. Pesticides, such as DDT, pollute water and push all species of birds and fish to the brink of extinction (Capra, 2000; Emoto, 2006). Fritjof Capra invites us, both explicitly and implicitly, to return to the mystical which is clearly brought about by religious teachings that prioritize God as the answer to everything (Gumelar, 2016).

Not a few texts in the Qur'an and Hadith that allude to natural and environmental issues. The most concrete is the prohibition of excessive use of natural resources. In fact, in the hadith, the Prophet strictly forbade Muslims to destroy trees, nature, houses and so on during war. This emphasizes that the teachings of Islam are very friendly to the environment. Seyyed Hossein Nasr argues that the destruction of nature is due to the spiritual crisis experienced by modern humans (Herdiansyah et al., 2018). The dichotomy between Islamic religious values and nature is what leads to this crisis. Islamic values, as can be seen in the Qur'anic verses, are in-hand with the nature. Therefore, the Islamic values and nature is inseparable. This view is what some of pesantren have firmly held.

One of pesantren which put the view into practice is Pesantren Hidayatullah Balikpapan, Kalimantan. It is one of the most prominent pesantren that has succeeded in making concrete contributions to environmental conservation through reforestation by turning wilderness and swamps into green areas, making artificial lakes, and assigning its students to participate in farming in plantation and agricultural areas around the pesantren (Aulia et al., 2019). Another similar institution is in Madura. It is Islamic Senior High School of Al-Amien 1 Pragaan (known as MA Al-Amien 1 Pragaan). It has been awarded with the title of the Adiwiyata school from the Ministry of Environment of Indonesia. This award is a proof that pesantren also have seriousness in nurturing environment awareness in the world of education. For this reason, this study analyzes the ecology integration design in MA Al-Amien 1 Pragaan's curriculum.

## **GENERAL DESCRIPTION**

Among the examples of schools that carry out environmental awareness efforts are several schools located in Parung District, Ciseeng District and Gunung Sindur District. Their strategies include (1) increasing environmental competence of school principals, educators and staff through workshops, (2) integration of the green curriculum with the 2013 National Curriculum (K-13) or the Education Unit Level Curriculum (KTSP) involving the school community (students, teachers, parents and other related parties) (3) implementation of environmental care schools (4) establishing cooperation and partnership in the environmental field with the government and the private sectors. (5) socialization of Adiwiyata schools and environmental education to schools, mass media, communities by the Environmental Agency (BLH) (Barkatin et al., 2016).

The environment-friendly movement is not only carried out by public schools, several pesantren-based schools also pay attention to this movement, especially after the Minister of the Environment launched the Eco-Pesantren Program. This program encourages increased knowledge, obedience and awareness of the Islamic boarding school

community in an effort to preserve the environment based on Islamic teachings (Nisa', 2019). The objectives of this program include empowering the Islamic boarding school community to improve the quality of an Islamic environment based on the Koran and al-Sunnah as well as making Islamic boarding schools a learning center of environmental awareness for the Islamic boarding school community and society (Fua, 2013). Healthy and environment-friendly Islamic boarding schools has been successfully achieved because of the encouragement and motivation by kiai and teachers (Herdiansyah et al., 2016). Eco-Pesantren appeared for the first time in 2005, when the Eco-Pesantren Daarut Tauhiid was initiated and founded by KH Abdullah Gymnastiar and his team in Bandung, West Java. Eco-Pesantren Daarut Tauhiid is a rural pesantren. Its physical design and activity plan was made according to the principles of sustainable development (Fua, 2013).

There are several things that must be considered in order to achieve a green boarding school, one of which is through green facilities and infrastructure. Islamic boarding schools must be able to create a beautiful, shady, cool and green pesantren environment. In Islamic boarding schools, this kind of environmental atmosphere is often found used as learning resources, especially for natural science materials (Kuswandi, 2020).

### **SPECIFIC DESCRIPTION**

The motto of the Al-Amien Prenduan Islamic Boarding School is perfect faith, broad knowledge, true charity, and noble character. Noble character includes attitude to God (*hablum minallah*), attitude to fellow human beings (*hablum minannas*) and attitude to nature (*hablum minal 'alam/bi'ah*). MA Al-Amien 1 Pragaan nurtures students to become human beings with complete personality (*insan ulil albab*), do good deeds in accordance with Islamic law, be a blessing to all nature and are environment-friendly and have healthy live habit.

The MA Al-Amien 1 Pragaan School intends to instill awareness, insight and systemic strategies derived from the metaphysical trilogy integration paradigm; metacosm, macrocosm and microcosm; God-Nature-Human. In other words, it wants to instill an upright pyramid theology; above as the creator, namely the metacosm, below there is nature as the macrocosm and there are humans as the microcosm. Thus, integration is carried out in two ways, integration with the values of Islamic teachings and integration with the environment. The upright pyramid is in line with the vision of the Al-Amien Prenduan Islamic boarding school.

This school integrate ecology in their curriculum and applies eco-sufism. The eco-sufism refers to Ikhwanus Shafa's thoughts on a natural perspective, that nature is the mother of humans. He argues that human will live comfortably if they are devoted and will suffer if they disobey nature, for example in the form of pollution. The school always echoes this value to the students. In addition, it also internalize the value that humans are caliphs on earth (nature). Cosmologically, humans have a human relationship with both God and nature. With this perspective, ecological consciousness, ecological character, and ecological literacy of students are expected to emerge, which is then visible in their daily lives. All of these perspectives and values are integrated and carefully crafted in the ecologically-integrated curriculum.

On the other hand, looking at the dynamics and privillages as Adiwiyata school, this school has targeted to be one of awardees. The first step it took was to make the school

a tourist destination for environmental education. It started with a research-based school program that was initiated in 2010 and has received recognition from the Ministry of Religion of the Republic of Indonesia. This school was selected as one of the Madrasah Award nominations for the Research-Based Madrasah Category in 2013. Of the six nationally selected, it is the only private madrasa that has been able to strengthen research traditions and has made many achievements in research at regional and national levels.

It later became Adiwiyata School in 2016, awarded by the Sumenep Regency Government and Provincial Adiwiyata School in 2017, awarded by the East Java Provincial Government. In 2018, it won second place in the Sustainable Food House Region Contest (KRPL) for the Sumenep Regency level. The branding of Environmental Education Tourism Madrasah has also made it win second place in the 2019 East Java Madrasa Management Innovation Competition organized by the East Java Regional Office of the Ministry of Religion for the Green Madrasah Category. In the same year, it also won the 2019 National Adiwiyata Award. The award was handed over by the Minister of Environment and Forestry, Siti Nurbaya Bakar, in person. In the future, it will achieve the highest level of an Adiwiyata school, an Independent Adiwiyata School. For that, it will need to foster 3 fostered schools/madrasas.

All these achievements were achieved because this school has designed learning process with the concept of a natural school. In order to present an ecology-integrated curriculum, apart from teaching environmental education materials, this school also designs all materials for all subject with an environmental approaches and perspectives. The integration of environment into the curriculum can be seen in the lesson plans and the syllabus that has been integrated with the environment.

The learning process in this school uses a lot of green open space. Teachers teach in shady places, a type of outdoor learning, and invite students to carefully thought about nature (*tadabbur alam*) and contemplates what is in the natural surroundings. This school has various facilities related to environmental education such as outbound facilities, gardening, farming, animal husbandry, fish rearing. It also has a range of programs related nature. To achieve the goal as an adequat environmental education tourism, it arrange several environmental education tourism activities such as the Waste Bank, Waste Recycling Laboratory and Mini Madrasah Bank, Science Park, Healthy Canteen and 'Darling' (from-environment) Canteen, Madrasah Green House and Seed Bank, Vertical Garden and Rooftop Garden, Flower Garden and Research Garden and the Quran Garden, Labyrinth Garden, School Mini Zoo, School Mini Farm, and Outbound Training Center.

The school takes several steps for the process of ecological integration. First, through understanding. Understanding is instilled through bedtime lectures. The theme raised relates the names of Allah (*asma'u al-husna*), imitating the attributes of Allah in terms of how important it is to take care of nature. Second, exemplary. In addition to receiving explanations, children also need examples. For this reason, the principal and teachers provide examples for students to see. Not only students, they also sweep, plant and water plants as a form of actualization of the understanding of the importance of having a noble character with nature. They are also actively involved in joint activities such as Clean Fridays and the Thousand Flowers Planting Action. By example, students catch a message that hits because what they hear and what they see is a unified whole. Exemplary is an important element. Third, Standard Operating Procedures. It relates to the integration of environmental curricula. For example, a rule is made that every morning the entire

school community is required to participate in a program called “red ants” (ten minutes to clean the madrasa). All students are like ants whose strength lies in their togetherness. Perhaps the most powerful animal in the world is the ant, not the elephant. Because ants have a stronger mutual cooperation and togetherness character.

These programs run and are implemented because of the commitment of the teachers to make the program a success. For example, all teachers will give punishment for students who do not pay attention to the ecological program. Priority in environmental care programs is known as SEKAM (waste, energy, biodiversity, water and food). Water in the school area is very abundant, so it must be used properly. Maximum and good use is a form of gratitude to God. In addition to teacher commitment, these programs are also supported by the establishment of a separate division for the Adiwiyata program.

Students are taught to be sensitive to the conditions of their surrounding environment. For this reason, there is always a handover of tree seeds from students to school as a symbol of the sustainability of nature conservation activities. The school invites students to pay special attention to the surrounding environment, one of which is a beach, in the south of the school. Students, accompanied by the teachers, are involved in the conservation of mangrove trees which is carried out regularly. This activity is an in-hand learning about how to handle the crisis of mangrove trees.

Students treat nature like they treat their friends because they realize their relationship with nature is similar to their relationship with God and other humans. When watering trees, they don't seem to carelessly water the surface of the soil, but make sure the water has seeped through to all the roots. In addition, students never cross the expanse of grass and plants to maintain the sustainability of environmental life and as a respect. This is a form of good attitude towards the environment. Every time a tree dies, teachers and student council members immediately instruct students to immediately replace it with new seeds so that there is a continuity of plant species in the environment. Likewise, students are strictly prohibited from picking flowers, cutting tree branches which will cause environmental damage. In other words, teachers teach students to be able to refrain from wanting to pick any flowers or plants if it is only to fulfill a wish. Students are allowed to pick flowers if the flowers or plants are really needed. They may pick only according to the amount needed, in moderation.

In relation to environmental care, the school also implements the 3R program, namely Reduce, Reuse, and Recycle. First, reduce. Students are taught about moderation. If they want to meet their needs, they just take what they need. They are always reminded to stay away from squandering. This is done so that nature can last forever. Second, reuse. Students are used to thinking creatively to use used goods. So, there is an instillation in the students' understanding that nothing is wasted in this world. For example, used bottles can be used as a seat, a place to sow shade trees and so on. Third, Recycle. In this case the students were taught how to recycle waste into fertilizer. In MA Al-Amien 1 Pragaan, many biopore holes were found. With this hole, non-plastic waste is piled up to be used as fertilizer. If one hole is full, then a new hole is made for the purpose of stockpiling.

## ANALYSIS

It is not enough to discuss ecology only in terms of the relationship between humans and nature. It must also involve a spiritual component (universe) because every human being has that potential, to connect with the universe. Environmental management is based on rules from *fiqh* sources, wrapped in an ethical spirit that comes from transcendent teachings. It then enriches the rules as it is compiled with the heart and the intention of devotion to God. In this way, the tendency to separate *fiqh* and sufisms is corrected. *Fiqh* will no longer be regarded as a rule of law dealing with external matters and sufism will no longer be regarded as a rule of law dealing with spiritual matters. *Fiqh* cannot be separated from ethics or morals. This belief makes an ontological understanding of *fiqh* not isolated and limited to formal juridical aspects, but also includes philosophical and sociological aspects (Sukarni, 2013). This kind of ecological understanding is the understanding applied by MA Al-Amien 1 Pragaan in carrying out environmental integrated education.

MA Al-Amien 1 Pragaan implements a curriculum that integrates Islamic values and environmental values. Similar integration can also be seen in other Adiwiyata schools such as SMPN 1 Larangan, MTsN 3 Pamekasan, and MAN 2 Pamekasan. At these schools, education is taught based on the environment, which is also integrated into all lessons. They also internalize the important values of maintaining and preserving the surrounding environment to their students (Siswanto et al., 2019).

The integration of the Islamic-based curriculum and the environment at MA Al-Amien 1 Pragaan did not produce textbooks or teaching materials. So, the integration can only be seen in the lesson plan and syllabus. Whereas in China, this integration can be seen in textbooks. The books discuss the substance of the relationship between humans and the environment and raise several cases that are directly related to everyday life. As with studies of textbooks in China and America, what is needed is case data in the presentation of textbooks studied by students (Wyner & DeSalle, 2020).

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However, the integration model carried out by MA Al-Amien 1 Pragaan is an integration model that is widely used in other Islamic schools in Indonesia. The integration of environmental education with materials in the pesantren curriculum can strengthen discussions about the environment. Islamic materials become the main basis for delivering materials in Islamic boarding schools. In developing the environmental education curriculum in Islamic boarding schools, LKK NU Blitar Regency has collaborated with the Blitar Regency Environmental Service. Currently, there are five pesantren that have been assisted by LKK NU. They are Al-Kamal Kunir, Nasrul Ulum Putri, Syirojut Tholibin, Al-Kautsar, and Mambaus Sholihin. These pesantren are assisted to implement the environmental education curriculum (Nisa', 2019).

MA Al-Amien 1 Pragaan builds awareness to care for the environment by echoing that humans are caliphs on earth. This religious motivation is often internalized to the students, in the form of lectures and environmental-based activities. It is important to note that in order to achieve an environment-friendly boarding school, students are nurtured to take care of the surrounding environment independently (Bahri, 2018). This awareness of monotheism is the main basis for the implementation of the Adiwiyata school at MA Al-Amien 1 Pragaan.

MA Al-Amien 1 Pragaan links environmental awareness to theology of faith; that God, man and nature are connected. It is in line with Ikhwan al-Shafa's view about understanding of cosmology. He argues that the universe is a portrait of the human soul. He sees that humans should treat and behave towards nature as they behave with fellow humans (Darraz, 2014). In Javanese culture, humans are considered as a microcosm called the little universe while nature is macrocosm or the big universe (Endriastuti & Kusumo, 2017). The implementation of the Adiwiyata school program at MA Al-Amien 1 Pragaan is based on an upright pyramid. It is that the upper vertice is the creator or metacosm, the lower vertices are nature as the macrocosm and humans as the microcosm.

The approach to promoting environmental care in Adiwiyata schools is quite diverse. For example, Madrasah Aliyah Darul Ulum and Madrasah Aliyah Babun Najah Banda Aceh City. They use the term of environmental citizenship. It is that every citizen has the right and responsibility to maintain, manage and preserve their surrounding environment. Environmental citizenship includes an understanding of environmental issues, rights and responsibilities of citizens in environmental issues, curative actions to overcome environmental problems and promotion activities of environment-friendly human activities for sustainability in the surrounding environment. Environmental citizenship has a positive relationship with students' environmental behavior at school (Yusuf et al., 2020).

The same thing can also be found at the Sumber Pucung Islamic Boarding School, Malang Regency. It asserts itself as an Islamic educational institution with a concern for nationalism and ecology. This concern is applied to the use and utilization of social and environmental resources. Socio-cultural and environmental conditions are part of the natural curriculum at the Sumber Pucung Islamic Boarding School, Malang Regency. It integrates itself into a unified scientific discipline-based society or sub-discipline. The curriculum includes and is colored by ideas from both the Sumber Pucung Islamic Boarding School, Malang Regency and community members (Miftahusyai'an & Mulyoto, 2017).

The effort to cultivate love for the environment at MA Al-Amien 1 Pragaan raises students' sensitivity to what happens in their surrounding environment. Christy M Moroye and Benjamin C. Ingman argued that, in order to develop, students' sensitivity needs to be continuously trained to take care of the surrounding environment (Moroye & Ingman, 2013). An environment-friendly school culture does not only raise sensitivity but also produces noble values, including caring for the environment and the spirit of achievement (Permana & Ulfatin, 2018).

To shape the character of environmentally caring and environmentally cultured individuals through the Adiwiyata program, several strategies are carried out. First, the integration of character building in learning activities. For this strategy, teachers play an important role. Second, the formation of madrasa culture. The culture is cultivated through

out times and by all school community. It is carried out through the example of the principal, routine activities, spontaneous activities, and environmental conditioning activities. Third, extracurricular activities. Scouts and outbound activities were chosen to shape the character of environmentally caring and environmentally cultured individuals. Both are good for building the character of caring for the environment and being cultured outside of formal school hours. Fourth, family and community involvement. It is carried out through meetings involving communication between parents/guardians and teachers such as the report day, parent-teacher meetings, or other meetings. The meetings become the key moments for madrasas to embrace the trust of parents/guardians (Hafida & Wahid, 2018).

The strategies developed by the MA Al-Amien 1 Pragaan school in integrating environmental values and dimensions into its curriculum are exemplary or role models by principals and teachers and environmental-based programs. This school does not involve the family and the surrounding community. It is understandable for MA Al-Amien 1 Pragaan is a pesantren-based school, where the majority of students reside in the pesantren. This makes it impossible for schools to involve families and communities in implementing the Adiwiyata school program. In other words, MA Al-Amien 1 Pragaan implements the pesantren model of Adiwiyata school, the one without much support from parents.

Among the factors that support the implementation of the Adiwiyata school program at MA Al-Amien 1 Pragaan are the school community support and the role model from teachers. In addition, It is also because students listen to bedtime lectures about the greatness of Allah through his creation, nature in daily basis. Among these factors, role model become the key as it would be difficult for this school to implement Adiwiyata programs without it.

Campaigning clean and healthy living behavior in Islamic boarding schools is not enough. Without a role model, the opposite might happen. Therefore, it is not surprising that sometime we find the slogan "cleanliness is next to godliness" become only a slogan, not internalized and put into practice. This slogan will not become a guide unless it is supported by the environment and the role models from pesantren leaders and teachers. One example is the findings regarding the clean and healthy living behavior of santri at Islamic boarding school X Yogyakarta. This finding relates to the facilities for cleaning the dormitory rooms for students, the numbers are inadequate and some are still self-funded for their procurement. In addition, knowledge about various things related to room cleanliness and health is still low, for example, they do not know the benefits of ventilation and windows, how to effectively arrange mattresses and sheets, and how to arrange clothes and shoes. The attitudes and actions of students in dealing with room health problems have actually been seen, but they lack of technical guidance from the dormitory administrators and teachers (Machfutra et al., 2018).

Unlike the pesantren, MA Al-Amien 1 Pragaan is equipped with facilities and infrastructure that can support the Adiwiyata school program, such as a zoo, flower garden, research garden and so on. The same thing can also be seen in other pesantren with regard to pesantren-based environmental management. The Nurul Hakim Islamic Boarding School in Lombok, West Nusa Tenggara has facilities and infrastructure that support the realization of environmental management, including a health clinic, adequate toilets for the number of students, a place to manage compost, a place for planting tree seedlings, deer breeding, independent agricultural land and outdoor class facilities, where students can



interact with nature. This facility makes the teaching and learning process more effective, especially when teachers deliver and relates their materials with *fiqh bi'ah* (Aulia et al., 2017).

## CONCLUSION

The Adiwiyata program in MA Al-Amien 1 Pragaan integrates Islamic values and environmental values. The integration is based on an upright pyramid. It is that the upper vertice is the creator or metacosm, the lower vertices are nature as the macrocosm and humans as the microcosm. The program run well because the school has established a special division for the program. In addition, role models from school leaders and teachers become the key point. They actively show students on how to take care of environment. The principal also regularly delivers speeches related to environment care and Islam. Through role model and speeches, the noble character of environment care is well nurtured as students observe and listen the same message. Another supporting factors is the adequate facilities and infrastructure and the 3R program (Reduce, Reuse, and Recycle).

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