



Development of an Eco-Pedagogy-Based Islamic Education Curriculum for Inclusive Education of Childhood Cancer Survivors at Sekolah-Ku YKAKI Yogyakarta

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Abstract: This study originated from the urgent need to provide relevant Islamic Religious Education (PAI) learning for childhood cancer survivors at Sekolah-ku YKAKI Yogyakarta, who study under vulnerable physical, psychological, and social conditions during long-term therapy. The current national PAI curriculum, which emphasises memorisation, is considered incompatible with their needs for more flexible, empathetic, and experiential learning. This study aims to develop an initial design for an inclusive eco-pedagogy-based PAI curriculum that integrates Islamic spiritual values with ecological awareness while accommodating students' limited physical stamina, fluctuating energy, and constrained study time. A descriptive qualitative approach with an embedded case study design was employed, involving semi-structured interviews with teachers, students, and parents, classroom observations, and document analysis. Data were analysed using Miles and Huberman's interactive model, including data condensation, display, and conclusion drawing, supported by source and method triangulation. The findings reveal five main challenges in PAI learning at YKAKI: fluctuating physical and emotional conditions, limited study time due to therapy schedules, restricted space and infection control measures, lack of varied media and activities, and misalignment between the national curriculum and the children's special needs. In response, an initial eco-pedagogy-based PAI curriculum was formulated with five core principles: spiritual-ecological, flexible-individual, humanistic-empathetic, experiential, and collaborative-community-oriented. This curriculum positions learning as a healing educational space that fosters spirituality, ecological care, and educational continuity for childhood cancer survivors.

Keywords: childhood cancer survivors; curriculum development; ecopedagogy; education; inclusive education; Islamic religious education.

Introduction

Ecopedagogy can be understood as a transformative educational paradigm that is not merely oriented toward the development of ecological knowledge, but also toward fostering moral, spiritual, and social awareness in human-nature relationships. Within the context of Islamic Religious Education, ecopedagogy derives its philosophical and theological foundation from the concept of human beings as *khalifah* (stewards) on earth, entrusted with the responsibility of maintaining the balance and sustainability of Allah's creation. Therefore, environmental education is not limited to the cognitive understanding of ecological issues but is viewed as a process of character formation that integrates critical reflection, personal responsibility, respect for human rights, and spiritual consciousness. Amid the challenges of the Anthropocene era and increasingly

complex global crises, ecopedagogy emerges as a holistic and interdisciplinary educational approach by connecting ecological literacy, religious literacy, and humanistic values to cultivate learners who are not only academically competent but also possess ethical sensitivity, ecological awareness, and the capacity to act responsibly toward the sustainability of life. Consequently, the integration of ecopedagogy into Islamic Religious Education becomes highly relevant as an effort to reconstruct the orientation of education from merely achieving academic outcomes toward the formation of individuals with ecological consciousness and a commitment to the common good (Indonesia, 2003). Cancer is a disease caused by an imbalance in hormone levels, which results in abnormal tissue growth in parts of the body that should be normal, or it can also be defined as a malignant tumour. Every year, approximately 6.25 million people are diagnosed with cancer globally, including 250,000 children. In 2014, the NCI recorded 1,665,540 new cases in the US, with 585,720 deaths, making childhood cancer the fifth leading cause of death in many countries (Wirastri et al., 2017).

Approximately 1 in 600 children develop cancer before the age of 16, with one child diagnosed every 3 minutes, which means around 480 children are diagnosed every day. Children with cancer face educational challenges during treatment, which lasts around two years. It is important to ensure they receive their right to education from early childhood education to secondary education, for the sake of their future. This process is difficult for children and their families. Children undergoing treatment, which is very exhausting, are also entitled to a proper education (Qolbi, 2021). The two- year intensity of cancer treatment is a means of learning that collaborates with treatment. This collaboration is the appropriate mechanism for the educational process with various learning materials, especially Islamic Religious Education. The Islamic religious education curriculum is beneficial for all students, including cancer survivors, with structured material that includes activities and experiences to understand Islamic teachings. This includes religious activities, practices, and evaluations to measure success (Qolbi & Hamami, 2021). The Islamic Religious Education curriculum is flexible, adaptable to existing conditions, applicable to needs, and proactive in achieving both short-term and long-term goals (Junaedi et al., 2021).

Islamic religious education provides strengthening values for children who are cancer survivors, supporting their healing process. The material must be tailored to the child's condition and packaged with an environment-based approach. In addition, the principle of justice in learning is a very important normative foundation in inclusive education. In Q.S. Al-Māidah verse 8, it is emphasised that fairness is a form of piety and honesty in social interactions. This fairness includes aspects of equal treatment, balanced responsibilities, and proportional rights according to the conditions of the students (Mardhotilla et al., 2020). Environment-based learning is the most important part of character building for every student. One of the causes of cancer is human unconsciousness in polluting the environment, for example in the form of cigarette smoke (Labiibah et al., 2024). Ecopedagogy is an educational approach that integrates ecological principles into learning, emphasising a balanced relationship between humans and the environment and awareness of the impact of human actions on the ecosystem (Yunansah & Herlambang, 2017). Ecopedagogy is an educational approach that integrates ecological principles. This ecopedagogical-based Islamic education is certainly very much needed for the learning process applied to children who are cancer survivors.

On the other hand, one crucial aspect that needs to be considered in designing the current Islamic Religious Education (PAI) curriculum is the presentation of religious teachings within a rational and contextual framework. Adopting the hermeneutic demythologisation approach popularised by Rudolf Bultmann, teaching materials that have been read within a mythological or dogmatic framework are reinterpreted from an existential perspective (Saefullah et al., 2023). This effort aims to remove the barriers of myth-laden literature and uncover universal meanings so that the teachings are not only conveyed but also able to dialogue with the rational, critical, and contemporary consciousness of modern humans. This approach is relevant for children who are cancer survivors, as they not only need teaching materials with spiritual nuances, but also contextual and applicable ones that are relevant to their life circumstances.

Eco-pedagogy is essentially not only oriented towards conveying environmental material, but also presents a comprehensive educational approach. This approach seeks to combine ecological values with spirituality and the active involvement of students in the learning process. Through this

integration, eco-pedagogy does not merely teach how to protect the environment, but also instils moral awareness and social responsibility. From an Islamic perspective, this is in line with the principle of *tawassus*, which is the awareness to live in harmony with nature as a form of obedience to the Creator. For children who are cancer survivors, this kind of approach is very important because, in addition to providing knowledge and skills, it also provides calming psychological support. By feeling a connection between themselves, the environment, and spiritual values, they are not only equipped with ecological insight, but also gain emotional strength that can support the recovery process and rebuild optimism in living their lives.

A literature review on the development of environment-based Islamic Religious Education (PAI) shows that there are various approaches to the eco-pedagogy paradigm. Zaimina & Munib (2023) in their article *Green Islam Education* developed an eco-pedagogy learning model based on environmental fiqh in urban Islamic schools, emphasising Islamic values such as *khalifah*, *maslahah*, *hima*, and the prohibition of *ifsad* (Zaimina & Munib, 2025). This model successfully transformed urban schools into ecological learning spaces through energy conservation practices, waste management, and environmental advocacy. Meanwhile, Wati et al. (2025), through their study entitled *Integrating Ecopedagogy into the Islamic Religious Education Curriculum to Foster Ecological Awareness*, highlight the gap between Islamic teachings on ecological responsibility and educational practices in schools (Wati et al., 2025).

The study offers the integration of an ecopedagogy-based Islamic Religious Education (PAI) curriculum to shape students' ecological awareness. In line with this, Sulwana & Harahap (2023) emphasise the importance of developing environment-based IRE learning methods and strategies so that students not only understand Islamic values cognitively but are also able to internalise them in their real lives (Sulwana & Harahap, 2025). Meanwhile, research by Matitaputty et al. (2022) at SMP Negeri 8 Ambon emphasises the implementation of *Education for Sustainable Development (ESD)* through ecopedagogy in formal learning, which has been proven to increase teacher and student participation and produce learning tools that are more contextual to school environmental issues (Matitaputty et al., 2022).

The four studies share a common emphasis on the importance of integrating Islamic and ecological values in education, as well as encouraging more contextual, participatory, and experience-based learning for students. However, these studies still focus on the general context of Islamic education in schools, urban schools, and healthy and normal formal schools. There has been no study that specifically highlights the application of an eco-pedagogy-based PAI curriculum in the context of children who are cancer survivors who have physical, emotional, and psychological challenges. Therefore, the author's research complements previous studies by emphasising the importance of developing an inclusive and adaptive ecopedagogical-based PAI curriculum for child cancer survivors at Sekolah-ku YKAKI Yogyakarta.

The novelty of this research lies in its focus on developing an ecopedagogical-based Islamic Religious Education (PAI) curriculum specifically for child cancer survivors. Unlike previous studies that focused more on the application of ecopedagogy in regular schools or in the realm of general education, this study designs a curriculum that is responsive to the medical, psychological, and social conditions of students who are undergoing or have undergone cancer therapy. This approach incorporates spiritual, ecological, and therapeutic dimensions, so that the curriculum not only functions as a medium for transferring religious knowledge, but also as an instrument for mental strengthening and emotional support.

Furthermore, the novelty of this research lies in the integration of Islamic values with ecological awareness contextualised within the situation of children who are cancer survivors. Islamic principles such as *khalifah fil ardh* (humans as stewards of the earth), *maslahah* (public interest), and *tawassuth* (awareness of balance) are presented in an applicable and inclusive PAI curriculum. Thus, this study contributes theoretically through the development of a new conceptual framework and practically through the design of a curriculum that can be used as a reference for other inclusive schools in providing relevant, adaptive, and meaningful religious education.

This study aims to describe the actual conditions of Islamic Religious Education for children who are cancer survivors at Sekolah-ku YKAKI Yogyakarta. By mapping these conditions, it is hoped that various obstacles faced, whether pedagogical, psychological, or social, can be identified, thereby

obtaining a factual picture of how children who are cancer survivors access religious education in situations of physical and emotional limitations.

The next objective is to design an inclusive and adaptive eco-pedagogical PAI curriculum based on the needs of child cancer survivors. This curriculum not only integrates religious values with ecological awareness but is also aimed at creating a more supportive, participatory, and calming learning environment. By achieving this goal, the research is expected to produce an applicable curriculum model that can strengthen the spiritual dimension while providing psychosocial support, so that children can continue to develop academically, emotionally, and morally despite their challenging health conditions.

Method

This study utilises a descriptive qualitative approach with exploratory and constructive characteristics (Sugiyono, 2023). This approach was chosen to understand complex social realities particularly the meanings, experiences, and perceptions of teachers, students, and parents in the development of an eco-pedagogy-based Islamic Religious Education (PAI) curriculum in the context of inclusive education for children who are cancer survivors. Qualitative methods require the researcher's direct involvement with the subjects through intensive interaction so that the information produced is in-depth and contextual (Supardi, 2023). In line with the case focus at Sekolah-ku YKAKI Yogyakarta, the research was field-based because the main data was obtained from teachers, students, and parents at YKAKI educational services and the related learning ecosystem.

Data collection was conducted through interviews and observations. Interviews with teachers who teach cancer survivors on a daily basis explored learning strategies, obstacles, and adaptations to the PAI curriculum; interviews with parents examined their views on inclusive education and learning adjustments to therapy schedules; while interviews with students mapped learning experiences, media/activity preferences, and energy readiness. Field implementation was verified by the "Survey Results from Survey Officers" and "Activity Documentation" packages (learning at Dr Sardjito General Hospital, Monday, 14 July 2025), as well as activity records at the Halfway House, Friday, 4 July 2025. Observations focused on teacher–student interactions, delivery of PAI material, integration of eco-pedagogical principles, signs of student fatigue/energy, and infection control compliance; literature studies reinforced the analysis, including a review of the educational challenges of cancer survivors (Supardi, 2023).

The data from the interviews and observations were transcribed verbatim, compiled together with field memos, and then analysed using Miles & Huberman's interactive model of collection, reduction, presentation, and conclusion drawing/verification (Saleh, 2017). Data reduction was carried out through open coding of the units of meaning from the interview transcripts and observation notes. The coding results were arranged in a cross-participant matrix (teacher–parent–student) to reveal similarities and differences in patterns of experience, then compiled into a code–theme map as the basis for thematic narrative development. The validity and reliability of the findings were ensured through triangulation of sources (teachers–parents–students) and methods, and this series of verifications became the basis for developing a needs–strategy map and a draft PAI curriculum based on inclusive and adaptive eco-pedagogy for the YKAKI context.

Results and Discussion

Inclusivity of Islamic Religious Education Based on Ecopedagogy

Islamic Religious Education is essentially a mission to guide, nurture, and strengthen Islamic ideals and behaviour in the hearts of students, so that they are able to understand, evaluate, and live out religious teachings in a manner consistent with the true principles of Sharia. The ultimate goal is to guide them to become individuals who are devoted to Allah SWT and consciously accept and carry out their role as caliphs who manage and prosper the earth. Fundamentally, Islamic Education positions learners as human beings who must be guided toward their *fitrah* (innate nature), namely as servants of Allah who are prepared to devote themselves to Him throughout their lives in this world. Therefore, Islamic Education is inherently holistic in nature, aiming to develop both personal piety in relation to God (*ḥablun min Allāh*) and social piety in relation to fellow human beings (*ḥablun min*

al-nās). This orientation is grounded in the fundamental foundations of Islamic education, which encompass *ta'lim* (the process of transmitting and developing knowledge), *tarbiyah* (the process of nurturing and developing human potential), and *ta'dīb* (the process of instilling *adab* and character formation). (Nilawati et al., 2026).

This educational activity is not merely a transfer of cognitive understanding, but also the simultaneous instilling of moral, spiritual, and social values to foster a sense of unity, tolerant behavior, and consistent practice of Islamic teachings in daily life (Qolbi, 2025). In today's idiom, Islamic Religious Education serves as a beacon of light that equips the new generation with critical thinking, a pluralistic attitude, and scientific accountability, while allowing interaction with scientific and technological advancements to the extent that the fundamental Islamic spirit remains intact and preserved.

It can therefore be understood that Islamic Religious Education is not merely positioned as a pedagogical instrument for transmitting religious knowledge, but rather as a comprehensive system of human development oriented toward the holistic cultivation of *fitrah* (innate human nature). This paradigm positions learners as active subjects of education who are guided to achieve a balanced development across spiritual, intellectual, moral, and social dimensions through the integration of the values of *ta'lim*, *tarbiyah*, and *ta'dīb*. Within this framework, the success of Islamic Religious Education is not solely measured by the mastery of cognitive competencies, but also by the formation of religious character manifested in both individual piety toward God (*ḥablun min Allāh*) and social piety toward fellow human beings (*ḥablun min al-nās*). Furthermore, amid the dynamics of modern society characterized by the advancement of science, technology, and social pluralism, Islamic Religious Education is required to remain relevant by adopting adaptive approaches without compromising its normative foundations. Consequently, Islamic Religious Education functions as a process of value transformation aimed at nurturing a generation that possesses spiritual consciousness, critical thinking skills, tolerant attitudes, scientific responsibility, and the capacity to engage constructively with contemporary changes while preserving the identity and essential spirit of Islamic teachings.

Inclusive education, particularly in the context of Islamic Religious Education, is an effort to provide equal opportunities for all children, including those with special needs. The basic principles of inclusivity include placing children with special needs in regular classrooms and ensuring full access to all learning resources, methods, and an adaptive and supportive learning environment (Akintayo et al., 2024). This is in line with the main objectives of education, which promote equality, diversity, and justice (Silva et al., 2023). To achieve effective inclusive education, several basic requirements must be met, including a flexible curriculum that can adapt to the diverse needs of students (Veradegita et al., 2021).

Inclusive Islamic education can be understood as an educational paradigm that positions every learner as a subject possessing equal dignity, rights, and potential regardless of physical, intellectual, social conditions, or other backgrounds. Philosophically, this concept is rooted in the fundamental principles of Islamic teachings, which affirm the universality of the right to education and the obligation to seek knowledge for all human beings without discrimination. Therefore, inclusive education from an Islamic perspective should not merely be understood as a technical strategy for integrating students with special needs into regular schools, but rather as a manifestation of the values of justice (*al-'adl*), equality (*al-musāwāh*), respect for human dignity (*karāmah al-insān*), and social responsibility in building a civilized society (Juna et al., 2026; Utomo et al., 2024; Zahara et al., 2024).

Eco-pedagogy is an educational approach that integrates ecological awareness, concrete actions to protect the environment, and critical reflection on the relationship between humans and nature. The philosophy behind ecopedagogy not only encourages cognitive understanding of environmental issues, but also awakens students' emotional and spiritual awareness of nature, which is important for building a deeper connection between them and their surroundings (Zocher & Hougham, 2020). In an educational framework, this includes the development of critical thinking, which is essential for understanding the complexity of environmental issues, as well as the importance of ecological awareness and personal responsibility for environmental sustainability (Desmarais, 2025).

The role of humans as caliphs on earth, QS Al-Baqarah: 30 describes this task as a mandate from Allah to manage and care for the environment. This has implications for the formation of an ecological attitude that is integrated into Islamic education, or what is better known as ecopedagogy. The concept of ecopedagogy seeks to instil ecological awareness in line with spiritual values in Islam, emphasising that the planet is a trust that must be safeguarded by humankind (Musayadah et al., 2021).

The theory of eco-pedagogy essentially emphasises the interconnection between sustainability and human dimensions, including human rights. Kwon and Kang (2025) in their study on education policy in South Korea show that ecological transition education should not only focus on environmental sustainability but also be integrated with the fulfilment of students' rights. This integration is important because sustainability without regard for human rights has the potential to cause injustice, while human rights without ecological awareness can neglect collective responsibility. Through Freirean ecopedagogical approaches, both should be treated as a complementary whole in shaping cosmopolitan moral and political agents (Kwon & Kang, 2025).

The concept of ecopedagogy emphasises the importance of a harmonious relationship between humans and nature, especially in the midst of the Anthropocene era, which is marked by an ecological crisis caused by human activity. It explains that ecopedagogy functions not only as a pedagogical strategy, but also as a philosophical framework that encourages critical reflection on the position of humans in the world. By combining humanistic-poetic and existential approaches, including through the lens of Taoist-Heideggerian thought, ecopedagogy is described as education that teaches humans to "find their place" in the universe and realise their ecological responsibilities. This shows that ecopedagogy is cross-cultural and can be used as a global foundation for formulating a more sustainable curriculum (Hung, 2025).

Furthermore, Baldelomar (2025) offers a reinforcement of the theory of eco- pedagogy by linking it to religious literacy. According to him, these two concepts have great potential to jointly address the complex crisis termed the "atmosphere of violence", namely the condition of uncertainty and destruction of the ecosphere due to necropolitics, biopower, and destructive human practices. Religious literacy provides a spiritual and ethical foundation, while ecopedagogy provides an ecological and pedagogical framework; when combined, the two can foster a more creative and collaborative transdisciplinary awareness in education. Thus, ecopedagogy does not stop at environmental issues, but also extends to moral, spiritual, and social dimensions that can strengthen education's responsiveness to global crises (MisirHiralall & Soules, 2025).

In the context of ecopedagogy, the integration of environmental and socio- spiritual values in education is very important. The ecopedagogical approach encourages ecological awareness and the development of character that cares for the environment (Romlah et al., 2024). In Islamic Religious Education, ecopedagogy reinforces religious lessons by emphasising the responsibility to care for the earth as *khalifah*, in accordance with Islamic teachings that respect all of God's creations. Ecopedagogy encourages students to understand the connection between religious values and sustainable environmental practices, so that education not only produces academically accomplished individuals but also those who are sensitive to environmental issues (Luke, 2021).

Ecopedagogy can be understood as a transformative educational paradigm that is not merely oriented toward the development of ecological knowledge, but also toward fostering moral, spiritual, and social awareness in the relationship between humans and nature. Within the context of Islamic Religious Education, ecopedagogy derives its philosophical and theological foundation from the concept of human beings as *khalifah* (stewards) on earth, entrusted with the responsibility of maintaining the balance and sustainability of Allah's creation. Therefore, environmental education is not limited to the cognitive understanding of ecological issues but is viewed as a process of character formation that integrates critical reflection, personal responsibility, respect for human rights, and spiritual consciousness. Amid the challenges of the Anthropocene era and increasingly complex global crises, ecopedagogy emerges as a holistic and interdisciplinary educational approach by connecting ecological literacy, religious literacy, and humanistic values to cultivate learners who are not only academically competent but also possess ethical sensitivity, ecological awareness, and the capacity to act responsibly toward the sustainability of life. Consequently, the integration of ecopedagogy into Islamic Religious

Education becomes highly relevant as an effort to reconstruct the orientation of education from merely achieving academic outcomes toward the formation of individuals with ecological consciousness and a commitment to the common good.

In order for the principles of inclusivity and eco-pedagogy to be realised in education, a holistic view of the learning environment must be applied. The concept of safe and friendly learning, as well as teaching that is responsive to students' needs and strengths, is essential (Holifurrahman, 2020). The development of a responsive curriculum that integrates the principles of Universal Design for Learning (UDL) is important in supporting diversity in the learning space (Rao, 2021). Through this method, education can address the challenges faced by students, including those with unstable health conditions, so that eco-pedagogy-based inclusive education not only prepares students for academic success but also produces individuals who are responsible for preserving the environment.

In the context of children who are cancer survivors, the integration of inclusivity and eco-pedagogy provides a more profound dimension of learning. They not only receive teaching materials that are appropriate to their health conditions and psychosocial needs, but also gain learning experiences that connect spiritual values with a healthy and supportive environment. This makes the Islamic Education curriculum more relevant, contextual, and transformative. With this approach, education becomes not only a means of cognitive development but also a space for spiritual, emotional, and social healing that helps children who are cancer survivors face life's challenges with optimism, compassion, and a stronger ecological awareness.

PAI Learning at Sekolah-ku YKAKI

Based on the results of surveys and interviews with teachers, students, and parents at My School YKAKI, it was found that teaching and learning activities (KBM) are carried out every Monday to Friday with a rotating class schedule according to the students' educational levels. Islamic Religious Education (PAI) is taught to all levels as it is a compulsory national subject, ensuring that every student has equal access to religious education even if they are undergoing cancer treatment. Teachers said that the schedule is flexible, so that students can attend classes without feeling burdened, and can still adjust to their fluctuating physical condition. This flexibility is one of the keys to ensuring that children continue to learn, without losing their enthusiasm or opportunities for development in the midst of their therapy.

In addition, interviews with teachers and school administrators revealed that PAI learning at YKAKI refers to the Merdeka Curriculum, which is applicable nationally in formal schools. Although it takes place in a special context, learning outcomes are still designed with reference to national standards so that students' competencies remain on par with their peers in their original schools. Teachers combine learning outcomes, goal sequences, and dimensions of the Pancasila Student Profile into simpler and more adaptive PAI activities. They emphasise that this approach provides space to personalise the learning experience according to student needs, which is very important for children who are cancer survivors with health conditions that are not always stable. Thus, PAI learning at Sekolah-ku YKAKI not only maintains students' academic continuity but also provides spiritual strengthening and empathetic values as part of their healing process.

In terms of methodology, the teachers explained that they apply substantive learning, which is presenting the material concisely, compactly, and directly to the point so that it is easier to digest in a limited time. This strategy enables children to understand the main points of religious teachings without becoming exhausted. Each learning session is shorter than in regular schools, lasting around 15–20 minutes, interspersed with breaks when the children start to look tired or lose focus. This is important because most students have to divide their study time with hospital appointments or medical procedures. Teachers also adjust the learning media so as not to burden the students, such as using short stories, short videos, or visual images. This method makes it easier for children to grasp the main points of the lesson, remain happy, and stay physically alert. Teachers say that learning success is not measured by how much material is memorised, but by the extent to which children feel capable, involved, and gain meaningful experiences.

Furthermore, interviews with administrators revealed that all YKAKI students remain administratively enrolled in their original formal schools, so that all learning outcome reports from Sekolah-ku YKAKI are sent back to their respective original schools. Teachers make regular notes

on learning progress, including attendance, involvement, task results, and recommendations for further learning. This mechanism ensures that the children's education process is officially recorded and that they do not lose any school years during their treatment. In this way, children can return to their original schools without having to repeat classes or fall behind their friends. YKAKI also emphasises that all educational services at Sekolah-ku are provided free of charge as a form of support for families struggling to cure their children. This means that the school does not take over the role of formal schools but acts as a bridge that maintains children's right to education in challenging situations.

Overall, the survey and interview results show that PAI learning at Sekolah-ku YKAKI is carried out using an adaptive, substantive, and collaborative approach so that children who are cancer survivors can continue to learn religion in a meaningful way without being burdened by their fragile physical condition. The implementation of a regular schedule, curriculum adjustments, concise substantive methods, and a reporting mechanism to the original school are important foundations that keep education running even in special circumstances. This learning not only maintains academic continuity but also provides the spiritual strengthening, hope, and emotional support they need to rise up and continue their lives.

Needs and Challenges of PAI for Childhood Cancer Survivors

Interview results revealed that Islamic Religious Education (PAI) at Sekolah-ku YKAKI faces unique needs and challenges not found in regular schools. Teachers emphasised that children who are cancer survivors have fluctuating physical and psychosocial conditions, so their learning speeds vary greatly. Ms Salsa emphasised, *"They each have their own learning speed, which cannot be compared to other children... they are also isolated from the outside world, so the learning approach must provide space for them to slowly and enjoyably reacquaint themselves with their environment."*

This statement highlights the need for a PAI curriculum that does not demand uniform achievement, but is adaptive to individual abilities. *First*, from an emotional perspective, teachers noted that students often experience a decline in motivation due to their physical condition and family support. *"The children's motivation fluctuates depending on their parents' attitude,"* said Ms Metta. This means that the PAI curriculum should not only design content, but also provide space for emotional involvement, for example by giving parents the opportunity to accompany their children's learning. This social support is in line with the principle of inclusivity, which emphasises the importance of a collaborative learning community (Veradegita et al., 2021).

Second, from the students' perspective, most of them expressed that they like stories and visuals, and quickly get bored if the learning is monotonous. Ifah said, *"I get bored if I just sit and there is not enough variety; to stay motivated, I need variety, for example watching videos"*. Afzan also emphasised that hearing the stories of the Prophet made religious lessons feel *"exciting and interesting"*. This means that students need a learning model that is light, multimodal, and interactive, not just based on memorisation. This indicates the need for a universal learning design approach so that every child can access and express learning according to their energy levels (Rao, 2021).

Thirdly, another challenge is the limited duration and time for learning, as students must divide their time between studying and therapy schedules at the hospital. Teachers acknowledge that learning can often only be done in short blocks of 15–20 minutes, depending on the student's condition that day. This is in line with the findings of Molcho, et al. (2019) that children who are cancer survivors need flexible scheduling, breaks, and a low learning load due to physical fatigue and the side effects of treatment. In addition, there are challenges in terms of limited physical space and infection control constraints, so outdoor activities are very limited. Some students are actually enthusiastic about learning outside (Ifah, Kalila), but others refuse because they feel it is noisy or too hot (Afzan is more comfortable in the classroom). The results of the interview with Kalila show the need to provide alternative eco-pedagogical activities that are safe to do indoors, such as making environmental posters, planting in small pots, or watching nature videos.

Fourth, in terms of subject matter, teachers assessed that the current PAI curriculum still emphasises memorisation too much, whereas students are more enthusiastic about practical activities. *"Children prefer to be invited to participate in hands-on activities, such as planting plants, making crafts from recycled materials, or composing short prayers about the environment,"* said Ms Metta.

These findings highlight the need to shift the curriculum approach from cognitive to experiential and contextual, as suggested by Kahn in his theory of eco-pedagogy, which emphasises real experiences, social justice, and ecological awareness (Kahn, 2010a, 2010b).

From all these findings, it can be concluded that PAI learning at YKAKI faces five main challenges: (1) fluctuations in students' physical and emotional conditions, (2) limited learning time due to therapy schedules, (3) limited space and risk of infection, (4) lack of variety in media and activities, and (5) the gap between the national curriculum and the special needs of children. These challenges also form the basis for designing a more flexible, humanistic, eco-pedagogical, and inclusive PAI curriculum.

Preliminary Design of an Inclusive Ecopedagogical PAI Curriculum

In terms of learning outcomes, each basic PAI competency (faith, worship, morals) is combined with Islamic ecological values such as *khalifah fil ardh*, the prohibition of *ifsad* (destroying the earth), and gratitude for nature. For example, when learning wudu, students are introduced to the concept of water conservation; when learning *amanah*, it is linked to maintaining environmental cleanliness. These values are not taught abstractly, but through simple practices such as planting in used pots, making cleanliness posters, or creating environmental prayers. *Second*, in terms of learning strategies, the programme is designed based on the principles of universal learning design so that every child can access and express the material according to their energy level. The material is presented in various forms (stories, videos, pictures), with each session limited to 15–20 minutes with breaks, flexible seating, and hygienic learning tools to prevent infection. Students are given a choice of activities according to their interests and physical abilities, such as drawing, making spoken prayers, or storytelling. Teachers begin each session by checking on the children's condition and then close with a brief reflection to build confidence. *Third*, in terms of assessment, an alternative approach is used in the form of a portfolio of work, observation of involvement, and feedback from parents. Assessment does not emphasise memorisation, but active participation, the connection between religious values and the environment, and spiritual attitudes. Parents are given light assignments such as noting down a moment of water conservation or writing a sentence of gratitude about nature at home, so that the values learned by children at school can continue at home.

Fourth, this curriculum is designed to be flexible so that it can be integrated with the curriculum of the students' original schools. All learning outcomes and progress reports are sent to their original schools so as not to interfere with academic administration. YKAKI is only a learning facilitator, not a substitute for formal schooling, so this curriculum is complementary in nature. *Fifth*, the curriculum design emphasises the role of the community in learning. Parents and volunteers are encouraged to participate in eco-pedagogical activities, such as making crafts from recycled materials or planting together, as social support has been proven to increase children's enthusiasm for learning. This community-based approach is in line with Kahn's idea that eco-pedagogy must be collective and build planetary awareness through shared experiences.

Towards an Ecopedagogical PAI Curriculum Model at Sekolah-ku YKAKI

Field data analysis shows that PAI learning practices at My School YKAKI cannot be separated from the unique context of cancer survivors who study in vulnerable physical, psychological, and social conditions. Students undergo long-term therapy that causes their energy levels to fluctuate, their study schedules to be uncertain, and their cognitive focus to easily decline. From interviews with teachers, it was revealed that students are only able to follow lessons for short periods of time, around 15–20 minutes, even then with breaks, light media, and a warm atmosphere. At the same time, teachers assessed that the PAI content in the national curriculum is still dominated by memorisation, making it feel less relevant to the learning needs of YKAKI children, who prefer stories, hands-on practice, and simple creative activities. Meanwhile, students emphasised that they preferred learning through stories about the Prophet, watching nature videos, or planting small plants, rather than listening to long explanations or writing summaries. These facts highlight the imbalance between the cognitive-centred PAI curriculum and the reality of children's learning needs, which are based on short, enjoyable, and health-adaptive experiences.

Ecopedagogy emphasises that education must go beyond the transfer of information towards ecological and social awareness, shaping learners as active subjects connected to nature and their communities. In ecopedagogy, learning is not merely about adding environmental content, but restructuring the learning experience so that students see themselves as part of the ecosystem, not separate entities. This approach is relevant to the condition of YKAKI students who feel emotionally isolated due to their limited learning space; instilling awareness that they are still part of life and God's creation is a form of psychosocial support as well as education. These findings confirm that the PAI curriculum needs to integrate Islamic ecological values (khalifah fil ardh, prohibition of ifsad, gratitude for nature) into every topic of faith, worship, and morals, so that learning brings spiritual meaning as well as ecological closeness.

From an inclusive education perspective, the theories of Veradegita and Olateju state that learning for children with special needs must emphasise flexibility, accessibility, and personalisation. This principle finds its validation in YKAKI's practice: teachers routinely adjust the time, choose media according to the students' daily energy levels, and allow children to express their learning outcomes in various forms (drawings, prayer recordings, oral stories). Children do not always write or memorise, but are allowed to show evidence of learning that suits their strengths on that day. This is in line with the concept of universal learning design, which emphasises variation in material representation, engagement, and expression of results. These findings confirm that the PAI curriculum at YKAKI needs to be designed not based on uniform targets, but to provide differentiated pathways that are accessible to children with very diverse conditions.

The literature on the education of child cancer survivors Molcho emphasises that their learning success is determined by three factors: (1) flexible scheduling, (2) light learning loads, and (3) emotional support. These three factors are clearly evident in the field data: teachers designed short modular sessions; the material was substantively packaged to focus only on the core meaning; and interactions were conducted empathetically to strengthen self-confidence. In other words, the field findings affirm the theory and simultaneously flesh it out: while the theory emphasises flexibility as a general principle, the data shows that this flexibility takes the concrete form of 15-minute sessions, breaks, light media options, and hygienic learning tools to prevent infection.

The synthesis of theory and data gives rise to new curriculum principles that differ from the regular PAI curriculum. *First*, the curriculum must be spiritual-ecological: every topic of faith, worship, and morals is interpreted within the framework of environmental awareness, so that students feel they are learning about religion while feeling close to nature. *Second*, the curriculum must be flexible and individualised: it must allow for adaptation in terms of time, duration, media, and choice of activities according to the students' daily physical condition. *Third*, the curriculum must be humanistic and empathetic: it must provide a calming learning experience that is full of affirmation and appreciation for the children's efforts. *Fourth*, the curriculum must be based on real experiences, not memorisation: Islamic values are taught through simple practices (planting, making hygiene posters, simulating water conservation during wudu) that can be done indoors and are not tiring. *Fifth*, the curriculum must be collaborative and community-based: connecting learning at school, home, and hospital through the involvement of parents, volunteers, and reporting to the home school.

These five principles form a new scientific finding: that the development of an Islamic education curriculum for children who are cancer survivors is not enough to be done by modifying the content, but must redesign the entire learning ecosystem to integrate spirituality, ecology, health, and inclusiveness. This is the added value that distinguishes the results of this study from previous eco-pedagogical studies that focused on regular schools and healthy children. By integrating Islamic ecological values, principles of inclusivity, and medical adaptation, this curriculum emerges as a new model that not only transfers religious teachings but also restores the dignity of learning for sick children.

These findings show that curriculum development is not merely about enriching the material, but rather conceptual engineering that arises from negotiations between theory and reality. The eco-pedagogy-based PAI curriculum at YKAKI is designed not to pursue target scores, but to enable children to learn according to their abilities on that day, strengthen their spirituality, foster their ecological awareness, and ensure the sustainability of their education. Thus, this study affirms that curriculum development for children who are cancer survivors must be interpreted as an educational

healing space a place where children can continue to grow in faith, character, and love for the earth, even with physical limitations

Conclusion

Based on the overall findings, this study concludes that the development of an eco-pedagogy-based Islamic Religious Education (IRE) curriculum at Sekolah-ku YKAKI Yogyakarta represents a scientific response to the unique educational needs of children who are cancer survivors and who learn under vulnerable physical, psychological, and social conditions. The findings demonstrate that IRE learning should be designed in a flexible, humanistic, and experience-based manner to ensure meaningful learning despite limitations in time, energy, and learning environments. Integrating ecopedagogy into the curriculum further highlights the importance of connecting Islamic spiritual values—such as faith (*iman*), worship (*ibadah*), and moral conduct (*akhlak*)—with ecological principles, including the concepts of *khalifah fil ardh*, the prohibition of *ifsad* (environmental destruction), and gratitude for nature as manifestations of religious responsibility.

The resulting curriculum model is both inclusive and eco-pedagogical, enabling children to participate in learning according to their daily physical capacity through shorter learning sessions, diverse instructional media, authentic assessment strategies, and active parental involvement. At the same time, it cultivates a meaningful relationship with nature as an integral part of Islamic worship and character formation. The study therefore confirms that curriculum development for children who are cancer survivors should extend beyond adapting learning content alone; it requires a comprehensive transformation of the entire educational ecosystem into a healing-oriented learning environment that nurtures spirituality, ecological awareness, psychosocial well-being, and the continuity of children's educational development.

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