

## INTEGRATING NEUROSCIENCE AND ISLAMIC EDUCATION TO PROMOTE CHILD-FRIENDLY SCHOOLS: A CASE STUDY OF ELEMENTARY SCHOOLS IN YOGYAKARTA CITY

Hendro Widodo<sup>1</sup>, Mohammad Jailani<sup>2</sup>, Panji Hidayat<sup>3</sup>

<sup>1,3</sup>Faculty of Education and Teacher Training, Ahmad Dahlan University Yogyakarta, Indonesia

<sup>2</sup>Faculty of Education (Tarbiyah), Institut Studi Islam Muhammadiyah Pacitan, Indonesia

e-mail: [hendro.widodo@pgsd.uad.ac.id](mailto:hendro.widodo@pgsd.uad.ac.id)<sup>1</sup>, [m.jailani@isimupacitan.ac.id](mailto:m.jailani@isimupacitan.ac.id)<sup>2</sup>,

[panji.hidayat@pgsd.uad.ac.id](mailto:panji.hidayat@pgsd.uad.ac.id)<sup>3</sup>

Received August 8, 2023; Revised June 26, 2024; Accepted June 27, 2024

### Abstract:

This research focuses on presenting a model for developing Child-Friendly Schools (SRA) in Yogyakarta's primary schools by combining principles from neuroscience and Islamic education. Employing a qualitative descriptive approach, the study engages school principals, teachers, and students as research subjects. Data collection entails observations, interviews, and documentation, with data validity ensured through source and technique triangulation. Analysis follows Miles Huberman's Interactive Model, encompassing data reduction, presentation, and conclusion/verification. The study reveals that SD Negeri Giwangan and SD Negeri Ngupasan effectively implement child-friendly school practices according to Yogyakarta Mayor's Decree No. 434 of 2016. These schools prioritize six essential indicators: 1) SRA Policy, 2) Curriculum implementation, 3) Training of educators and staff in children's rights, 4) SRA facilities and infrastructure, 5) Fostering child participation, and 6) Encouraging parent involvement. The incorporation of neuroscience insights and Islamic education principles has notable positive implications. This approach contributes to shaping students' behavior to become both well-behaved and child-friendly. Moreover, it facilitates the creation of an enjoyable learning environment and nurtures students' imaginative capabilities.

### Abstrak:

Penelitian ini bertujuan mendeskripsikan model pengembangan Sekolah Ramah Anak (SRA) berbasis neurosains dan pendidikan Islam di SD Kota Yogyakarta. Penelitian ini merupakan penelitian deskriptif kualitatif. Subjek Penelitian adalah kepala sekolah, guru, dan siswa. Teknik Pengumpulan data menggunakan observasi, wawancara, dan dokumentasi. Keabsahan data menggunakan Triangulasi sumber dan teknik. Analisis Data menggunakan Model Interaktif Miles Huberman mencakup reduksi data, penyajian data, penarikan kesimpulan/verifikasi. Hasil penelitian ini adalah SD Negeri Giwangan dan SD Negeri Ngupasan menerapkan sekolah ramah anak berdasarkan Surat Keputusan Walikota Yogyakarta Nomor 434 Tahun 2016. Kedua sekolah tersebut menerapkan 6 (enam) indikator Sekolah ramah anak yaitu 1) Kebijakan SRA, 2). Pelaksanaan kurikulum, 3). Pendidik dan tenaga kependidikan terlatih hak-hak anak, 4). Sarana dan prasarana SRA, 5). Partisipasi anak, dan 6). Partisipasi orang tua. Implikasi dari neurosains dan pendidikan Islam membantu peran siswa berlaku baik dan ramah anak. Menciptakan suasana lingkungan sekolah yang menyenangkan dan menumbuhkan sikap imajinasi kreatif siswa.

### Keywords:

Child-Friendly Schools, Elementary Schools, Neuroscience, Islamic Education

---

**How to Cite:** Widodo, H., Jailani, M., & Hidayat, P. (2024). Integrating Neuroscience and Islamic Education to Promote Child-Friendly School: A Case Study of Elementary Schools in Yogyakarta City. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah dan Keguruan*, 27(1), 154-177. <https://doi.org/10.24252/lp.2024v27n1i10>.

Copyright 2024 © The Author(s)

The work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)



## INTRODUCTION

The Ministry of Women's Empowerment and Child Protection introduced Ministerial Regulation No. 8 of 2014, which outlines policies for Child-Friendly Schools (SRA) as an integral component of the broader Child-Friendly District/City Policy criteria. Yogyakarta City's initiative to establish pilot child-friendly schools aligns with the implementation of Regional Regulation No. 1 of 2016, aimed at fostering Child-Friendly Cities. Similarly, Sleman Regent Regulation No. 19 of 2016 underscores the local government's dedicated commitment to advancing SRA in Yogyakarta.

Data on violence against elementary school children in January-June 2024 shared by the Ministry of Women's Empowerment and Child Protection (KemenPPA) through the website "Online Information System for the Protection of Women and Children" shows that as many as 2,241 elementary school children were victims of violence (KemenPPA, 2024). This figure is alarming as it reflects the high prevalence of violence in an environment that should be safe for children. Violence includes various forms such as physical, psychological, and sexual abuse experienced by children. This data emphasises the importance of further efforts in preventing and handling violence against children, including increased public awareness, better education on children's rights, and strict law enforcement against perpetrators of violence.

Formal educational institutions, specifically schools, play a crucial role beyond merely imparting knowledge and facilitating play experiences. They are responsible for creating a conducive and enjoyable environment where children can comfortably develop their potential. Schools significantly contribute to various aspects of students' personal growth, including social, emotional, spiritual, cognitive, affective, psychomotor, physical, and psychological development. Despite this essential role, issues of ill-treatment of children persist, including instances of violence within school premises. According to KPAI data from 2013, both teachers and students have been involved in acts of violence against children. These acts include physical actions such as twisting, pinching, kicking, and hitting, as well as psychological mistreatment like verbal insults and name-calling (Pabbajah, Abdullah, & Widayanti, 2020; Wargadinata, 2020).

Child-friendly schools strive to cultivate an environment that supports the comprehensive development of students, focusing on academic success as well as their emotional, social, and moral development (Fegter & Kost, 2023). Combining neuroscience

---

with Islamic education offers a distinctive approach to achieving this objective. Neuroscience sheds light on the processes of how children learn and grow, while Islamic education emphasizes ethical and moral values. Together, they create a robust framework that can improve the educational experience in elementary schools (Jones & Ratten, 2021).

In Yogyakarta City, a number of elementary schools have adopted this integrated strategy to create a nurturing and supportive learning atmosphere. By leveraging the insights from neuroscience regarding brain functions, educators can adapt their teaching strategies to meet the cognitive and emotional needs of students. For example, understanding the stages of brain development enables teachers to introduce new concepts at optimal times, making learning both effective and enjoyable (Diana, Chirzin, Bashori, & Suud, 2021; Fegter & Kost, 2023). The provided data underscores that violence within schools affects students in both physical and non-physical ways. Regardless of the form, type, or those involved, such violence contradicts the moral and ethical principles of education. Education fundamentally revolves around nurturing humanistic values and fostering the comprehensive development of students' potential in a humane and holistic manner (Thambu, Prayitno, & Zakaria, 2021).

When students encounter negative experiences, it often results in stress, diminishing their overall quality of life. Stressful situations can cause students to perceive their school's learning environment as unpleasant (Rahman & Subiyantoro, 2021). Unbeknownst to them, these incidents can significantly impact their educational journey. A positive school atmosphere fosters students' enthusiasm for learning, while an uneasy school environment can make them reluctant to attend classes or even view school as a burden. Dull and unpleasant school settings may lead to negative behaviors such as skipping classes, bullying peers, and damaging school property (Jailani, 2022). As students' feelings of dissatisfaction increase, their evaluation of the school tends to decline, which is evident in the measurement of school well-being, reflected in students' assessments of the school.

Islamic education adds to this by promoting strong moral values and character development, which are crucial for students' personal and social growth. These schools embed Islamic teachings within their curriculum, encouraging principles such as empathy, respect, and community service. This dual emphasis not only enhances academic performance but also prepares students to become responsible and ethical members of society. The case study of elementary schools in Yogyakarta City illustrates the success of integrating neuroscience and Islamic education. These schools have experienced positive results, including increased student engagement, higher academic achievement, and a more harmonious school environment. This educational model offers a valuable example for other schools seeking to foster a child-friendly environment that nurtures both intellectual and moral development (Ritonga, Hakim, & Nurdianto, 2023).

If we associate a normal brain with fully developed neurobiological structures, a healthy brain with strong thinking abilities, and a smart brain with exceptional ideas, then a character brain encompasses the physiological aspects of all three (normal, healthy, and intelligent brains) at the cellular-molecular level (Fritz & Baggio, 2021; Suyadi & Sutrisno,

---

2018b; Suyadi & Widodo, 2019). The concept of a character brain is closely tied to students' traits and attitudes, particularly their friendly demeanor towards teachers, peers, and the environment. The stimuli the student's brain receives play a crucial role in shaping their character. Thus, the term 'character brain' aligns with the cultivation of students' attitudes and traits, drawing inspiration from Taufiq Pasiak's brain education theory in the context of character education (Andrews, Walter, & Ayse Dalyan, 2020; Suyadi, Asmorojati, Yudhana, & Nuryana, 2022)

According to experts, six networks of the nervous system in the brain work together to regulate human behavior. These networks include the prefrontal cortex and the cerebrum. Similarly, in Islamic education, a good education begins with morals and attitude. Many Muslim scholars, including Al-Ghazali in Farida (Farida & Kasdi, 2021; Al-Ghazali, 2003) argue that morality is a science that studies life and wisdom.

The SRA (Child-Friendly Schools) program aims to establish a peaceful and child-friendly educational environment, raising awareness among teachers and students to eliminate violence and discrimination within schools. This program seeks to restore the enjoyable aspect of education that aligns with human nature, offering an alternative solution to the prevalent issue of school-related violence. Both public and private elementary schools in Yogyakarta have embraced the SRA initiative. Through this study, we aim to outline the implementation of SRA in these schools and develop a suitable SRA model that aligns with the unique characteristics of Yogyakarta's students. Therefore, the research objective is to depict the development model of SRA in Yogyakarta's elementary schools.

## **RESEARCH METHOD**

This research employs a qualitative descriptive approach, focusing on school principals, teachers, and students as its subjects. It utilizes multiple data collection methods such as observation, interviews, and documentation to ensure comprehensive data gathering. Triangulation of sources and techniques enhances data validity by cross-verifying information from different perspectives and methods. The data analysis follows Miles and Huberman's Interactive Model, involving data reduction to condense large amounts of data into manageable units, data display to organize and summarize information effectively, and conclusion drawing and verification to derive meaningful insights and validate findings (Aw & Ayoko, 2017).

Qualitative descriptive studies like this are prevalent in current international reputable journals, particularly in education and social sciences. They are valued for their ability to provide rich, detailed descriptions of phenomena, offering insights into complex interactions and contexts within educational settings. By focusing on school principals, teachers, and students, this study aims to capture diverse perspectives on the implementation and impact of integrating neuroscience and Islamic education in creating child-friendly schools in Yogyakarta City (Alvesson, 2019; Solong, Munirah, & Arif, 2020).

Observation as a data collection method allows researchers to directly witness and record behaviors, interactions, and environmental factors influencing the learning

---

environment. Interviews provide an opportunity to gather in-depth insights and subjective experiences from key stakeholders, shedding light on their perceptions, attitudes, and challenges faced. Documentation analysis complements these methods by examining official records, reports, and educational materials that inform policies and practices.

The triangulation of data sources and techniques enhances the credibility and reliability of findings by corroborating information across different data collection methods. This methodological rigor is crucial for ensuring the validity and trustworthiness of qualitative research in international scholarly contexts. It enables researchers to construct a comprehensive understanding of how neuroscience and Islamic education intersect to promote holistic child development and foster supportive educational environments in elementary schools.

In conclusion, this qualitative descriptive study in Yogyakarta City elementary schools contributes to the growing body of knowledge on child-friendly education by exploring innovative approaches that integrate scientific insights with ethical teachings. By employing robust methodologies aligned with contemporary international standards, the research aims to provide actionable insights for educators, policymakers, and researchers interested in enhancing educational practices that prioritize both cognitive and moral development in children (Santoso, 2017; Vira & Skoog, 2021).

## **RESULTS AND DISCUSSION**

The implementation of Child-Friendly Schools (SRA) involves six main elements: 1) SRA Policy, 2) Curriculum integration, 3) Educator and staff training on children's rights, 4) SRA facilities and infrastructure, 5) Student involvement, and 6) Parent engagement. Each of these components will be detailed and evaluated to assess how SRA is being implemented in elementary schools in Yogyakarta.

### **Child-Friendly School Policy (SRA)**

On a nationwide level, the implementation of Child-Friendly School (SRA) policy is regulated by the Republic of Indonesia's Regulation Number 8 of 2014, issued by the State Minister for Women's Empowerment and Child Protection. According to Article 3 of this regulation, the Child-Friendly School policy serves as a guideline for various stakeholders, including children, in developing SRA as a means to achieve the indicators for Child-Friendly Cities (KLA).

In Yogyakarta, SDN Giwangan and SD Negeri Ngupasan are elementary schools that have embraced the SRA approach. The SRA policy in Yogyakarta is outlined in the Regional Regulation (Perda) Number 1 of 2016, focusing on creating cities suitable for children. This regulation emphasizes the importance of child-friendly schools, healthcare services, and villages to fulfill children's rights. To enact this regional regulation, the Mayor of Yogyakarta introduced Regulation Number 49 of 2016, specifically addressing Child-Friendly Schools. Following these regulatory steps, in 2019, the Mayor issued Decree Number 217 of 2019, officially establishing Child-Friendly Schools in the city.

---

Child-Friendly Schools prioritize students' psychological development and incorporate learning methods aligned with their psychological aspects and natural learning patterns (Agustina, 2019). Educational institutions hold a significant responsibility to foster a supportive learning environment that ensures students' physical and psychological safety. This approach creates a pressure-free and secure atmosphere that enhances students' learning experiences at school.

The national policy set by the Central Government is then translated into regional regulations, which are further implemented within schools. Giwangan Public Elementary School, for instance, explicitly articulates its vision: "To cultivate students of Giwangan Public Elementary School who are faithful, dedicated, exhibit good character, possess cultural awareness, are environmentally conscious, excel in achievements, and foster a child-friendly school environment.

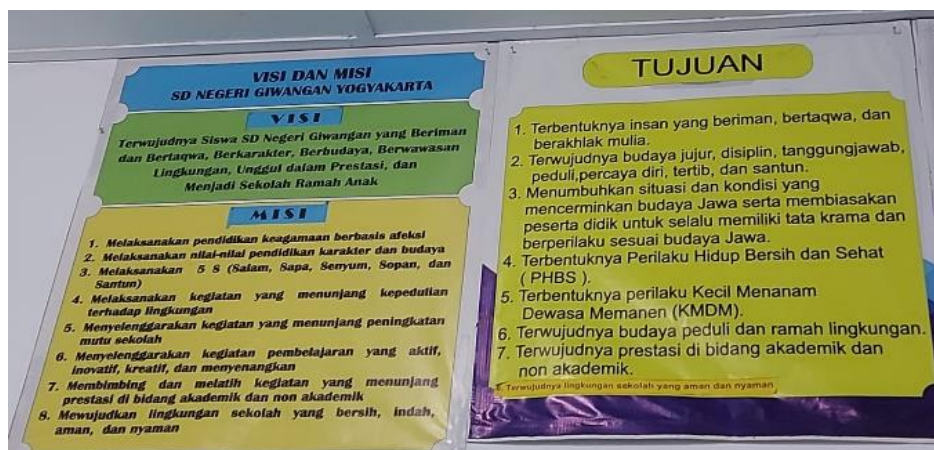


Figure 1. Vision and Mission of SD Negeri Giwangan

In 2015, SD Negeri Giwangan received the national-level Adiwiyata award from the Indonesian Ministry of Environment and Forestry. Additionally, the school earned the Adiwiyata Mandiri award in 2017 and secured the 1st prize for Child-Friendly Schools in the City of Yogyakarta in 2019.

At Ngupasan Public Elementary School, on November 7, 2019, teachers, student representatives from grades I to VI, the school committee, and community members jointly committed to establishing a child-friendly environment. They formalized this commitment through seven agreements: a) fostering faith and virtue based on just and humane principles; b) creating a safe, clean, healthy, green, inclusive, and comfortable school for students; c) upholding children's rights and being a motivating, facilitating, and friendly presence; d) maintaining a school environment free from vandalism and physical or non-physical violence; e) promoting a school that is free from smoking and drugs; f) nurturing a school atmosphere as a communal, learning-centered, and educational space, extending beyond the family; and g) ensuring a school environment that is free from pornography.

The school's policies are dedicated to supporting the implementation of SRA and strictly oppose any form of violence towards students. These policies are seamlessly integrated into every school program, both within and outside the classroom. All programs

---

are designed to promote child-friendliness, ensuring that students feel comfortable and secure in their learning environment. Teachers cultivate an inclusive and interactive learning atmosphere that emphasizes non-discrimination, while facilities and infrastructure further contribute to the positive experience. The involvement of parents and the wider community provides essential attention and support to this child-friendly approach.

### **Implementation of Curriculum**

SDN Giwangan already has a vision, mission, and goals related to child-friendliness. In addition, the school also has a special curriculum, syllabus, and Learning Implementation Plan (RPP) regarding a child-friendly environment so that teachers can insert activities related to the environment in classroom learning. This can be seen in the teacher's lesson plan that the expected student characteristics include discipline, diligence, responsibility, thoroughness, cooperation, tolerance, self-confidence, courage, care for the environment, and love for the environment. These character values are expected to be built into the learning process.

At SD Negeri Ngupasan Yogyakarta, teachers prepared lesson plans based on children's rights that are integrated into learning activities both inside and outside the classroom. The child-friendly teacher's lesson plan does not contain violence. Likewise in the implementation of learning, the teacher does not commit violence either physical or verbal violence.

Ngupasan Yogyakarta Elementary School has various kinds of extracurriculars including Karawitan extracurriculars, music, batik, Scouting, PRB, Journalism, Silat, Al Qur'an Education Park (in collaboration with the mosque in the vicinity), and sports extracurriculars. PRB and Scout extracurriculars are one of the supporting extracurriculars for the SRA program. Apart from extracurricular activities, several other activities support the development of student's interests, talents, and innovation as well as creativity, namely the inspirational class and the creative class.

### **Trained Educators and Education Personnel on Child Rights**

Educators and school staff's knowledge and understanding of SRA is reinforced through seminars or workshops organized either by the government or by the schools themselves, often featuring external speakers. SDN Ngupasan Yogyakarta has conducted several seminars and workshops related to the SRA program and children's rights. One such event took place on November 23, 2018, focusing on outreach to school members, including parents. The theme of the event was "Parenting for Today's Parents," with speakers from the Yogyakarta branch of KPAI (the Indonesian Child Protection Commission).

Trained educators and education personnel play a crucial role in promoting and safeguarding child rights within educational settings. By receiving comprehensive training on child rights, educators gain a deeper understanding of the legal frameworks and principles that protect children's well-being and development. This training equips them



---

to create a safe, inclusive, and supportive environment where children's rights are respected and upheld (Albantani & Madkur, 2017).

In many educational institutions, training on child rights covers a range of topics, including the United Nations Convention on the Rights of the Child (UNCRC), national laws and policies related to child protection, and strategies for promoting children's participation and empowerment. Workshops and seminars organized by schools or government agencies often involve experts and practitioners who provide insights into best practices and real-life case studies. Such initiatives not only enhance educators' knowledge but also empower them to implement effective policies and practices that prioritize the rights and dignity of every child in their care (Farkhani, Baidhawiy, & Kuswaya, 2021; Pertiwi, Llewellyn, & Villeneuve, 2020).

### **SRA Facilities and Infrastructure**

In an interview with Mr. Rian Okta Rahmana, the Adiwiyata Team and Child-Friendly School representative, it was explained that the presence of Adiwiyata and child-friendly schools significantly enhanced the environment at Giwangan Elementary School. Efforts were made to make the surroundings cleaner, livelier, more beautiful, and comfortable. School facilities were upgraded to support Adiwiyata and SRA initiatives. For instance, trash cans were placed in front of classrooms, a school garden was established for planting various types of plants in pots and along class walls. Posters advocating for a clean environment were displayed, and spaces for animals like fish ponds and bird parks were provided.

The comprehensive facilities and infrastructure at SD Negeri Giwangan include amenities like a prayer room, classrooms, library, computer laboratory, science laboratory, hall, administrative rooms, teacher and student restrooms, cooperative areas, and more. These facilities support both Adiwiyata and SRA activities. Equipped with various essential items such as chairs, tables, fans, student work displays, blackboards, lamps, projectors, and more, the classrooms provide a conducive learning environment. This complete set of facilities plays a crucial role in creating a child-friendly atmosphere that emphasizes children's rights throughout the teaching and learning process.



Figure 2. SRA Facilities and Infrastructure at SD Negeri Giwangan

Learning facilities and equipment at Ngupasan Public Elementary School are equipped with LCD, CCTV, and fans in each classroom, as well as trash cans and hand washing areas outside the classroom equipped with soap and written instructions for



---

washing hands properly and correctly. Green bins are for leaf waste, yellow bins are for paper waste, and red bins are for plastic waste. The number of trash bins is sufficient, almost every corner of the classroom has a trash can.

SD Negeri Ngupasan Yogyakarta has a School Health Unit (UKS) to provide health services for students and school residents with equipment such as beds, first aid kits, and weight and height measuring devices. Besides that, it also has a healthy canteen that provides clean and healthy food.

### **Child Participation**

The activities described in the data above reflect aspects of implementing the Child-Friendly Schools (SRA) program at SDN Giwangan and SDN Ngupasan in Yogyakarta. Specifically, these activities highlight efforts to instill environmental awareness and promote student participation within the school community. At SDN Giwangan, the daily "antlis" (10 minutes for the environment) activity involves all students and teachers in community-oriented tasks such as community service, plant care, waste management, and animal care. This initiative aims to nurture a caring attitude towards the environment among students, fostering their sense of responsibility and stewardship from an early age (interview with teacher).

Similarly, SDN Ngupasan conducts the Clean Friday program, where teachers and students collaborate in cleaning various school areas regularly. This participatory approach not only maintains cleanliness but also cultivates a sense of ownership and pride in the school environment among students. Regarding student participation in the SRA program, while SD Negeri Ngupasan does not directly involve students due to parental representation, efforts are made to engage students in meaningful activities such as classroom organization, library management, and assisting in school operations. Students also participate actively in extracurricular activities and inspirational classes, contributing to a vibrant and inclusive school community (interview with teacher).

These initiatives underscore the schools' commitment to creating child-friendly environments that prioritize students' holistic development, community engagement, and environmental sustainability.

### **Parent Participation**

Parental involvement and support in the implementation of SRA are needed both materially and immaterially. Parental participation is also accommodated in school committee forums, as well as school activities that involve parental participation such as *parenting day activities*. Likewise in each class, communication is built through the WhatsApp group by the homeroom teacher with parents. Discussions on learning activities and school programs are conveyed through the forum. Parents' participation in SD Negeri Giwangan can be seen in the picture below:



Figure 3. Parent participation in Giwangan Public Elementary School

Likewise, at SD Negeri Ngupasan, communication between parents and the school is facilitated through class association. The association of parents of students that have been formed plays a big role in the cooperation between the school and the parents of students. This association is utilized by the school to socialize Child-Friendly Schools (SRA) and Adiwiyata as superior school programs. Communication is getting better between schools and parents through social media such as WhatsApp groups.

Child-Friendly Schools view that every individual child has the same rights to have comfort and safety, develop self-potential, determine and make life choices, communicate, be able to live in situations and dynamics that are constantly changing, face many challenges in life, and make a significant contribution. worth. Teachers also provide educational services that are supportive and inclusive to develop a learning environment based on humanistic values in schools (Akmaliyah, Hudzaifah, Ulfah, & Pamungkas, 2021).

Muchsin (2010) explains that the pattern of child-friendly based education is the implementation of education that treats children as students who have the right to express themselves, play, and have fun. An educational process that not only eliminates the practice of radicalism but also has serious attention to aspects of management policies that care about peace, tolerance, and mutual respect. explained that child-friendly school interventions are designed using a whole-school approach to help build social competence and student relationships to reduce the likelihood of bullying. This program is carefully designed and implemented and engages students in different social contexts (Bahruddin, Halomoan, & Sahid, 2020).

The active role of students' parents in school activities is relevant to the opinion of Olweus (1993) which details an approach that involves intervention at the school, class, and individual levels, including the following components: (1) distributing questionnaires to adults and students to understand the extent of the problem, justifies intervention efforts, as well as serves as a benchmark for the impact of improving school climate after the intervention component is carried out; (2) raising parents' awareness through campaigns in parent-teacher forums, bulletins, and at other meetings. The aim is to increase parents' awareness of the importance of parental involvement and support in the success of program goals. The synergy between parents and teachers is necessary for guiding children because, at school, teachers no longer use acts of violence in disciplining

---

students which can occur in educator interactions with students, so parents are also expected to do the same when students are at home.

Until now, our educational orientation has tended to be left-brain functions, especially in Islamic religious learning. So that it does not allow development proportionally on the function of the right brain. This happens because learning in schools still tends to prioritize curriculum achievement targets by imaginatively and creatively imagining curriculum content. This affects students who are less controlled regarding the direction of goals and learning adjustments. And these symptoms are still visible since the process of elementary school education (SD) to the world of higher education. So that this does not provide opportunities for students to think divergently and unconventionally.

Even if you only prioritize or focus too much on the excessive use of the left brain, it will automatically transfer the function of the right brain, producing smart children like robots or computers, but losing capital is very valuable in life in the future, namely, the mindset that uses conscience, stimulates creativity and his imagination is free without pressure and coercion from anyone.

Meanwhile, Islamic education is a supporter and reinforcement in the formation of character which has implications for being environmentally friendly and child-friendly. Especially in Elementary Schools (SD) Islamic education is very important to get used to such as formation and moral education in interacting and communicating with teachers, parents, and friends.

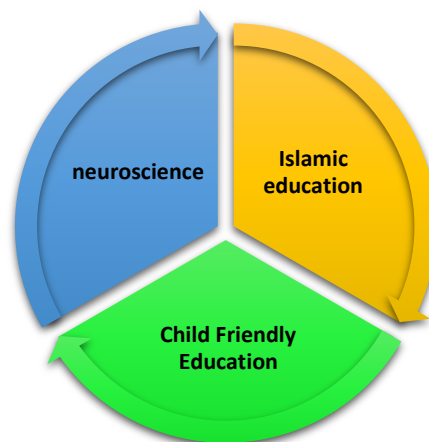


Figure 4. Neuroscience Relations in Child-Friendly Education

If interpreted between neuroscience and child-friendly implementation in schools, they are interconnected. Neuroscience as a guide and benchmark in directing students to behave well. The neuroscience that passes through the *prefrontal cortex* gives a good response to students' brains. With a good approach to students. One of them is to motivate and direct students in positive thinking and good behavior. According to Suyadi (2020) in his book entitled "tracing the Traces of the Brain and 'Aql in the Qur'an and Neuroscience, educating students is not enough once but is needed repeatedly.

Sousa stated that although educators (teachers and lecturers) are not brain experts (neuroscience), from a neuroscience perspective, the educator's daily profession is

"changing the brain". This is because when the brain learns, neurophysiological changes occur toward optimizing higher thinking skills. But Silvester argues that for centuries educators altered the brain without the slightest knowledge of neuroscience. This is because there is no specific science studying brain performance in education. Therefore, it is necessary to develop neuroscience in the field of Islamic education. The neuroscience-based child-friendly implementation steps are shown in the following figure:

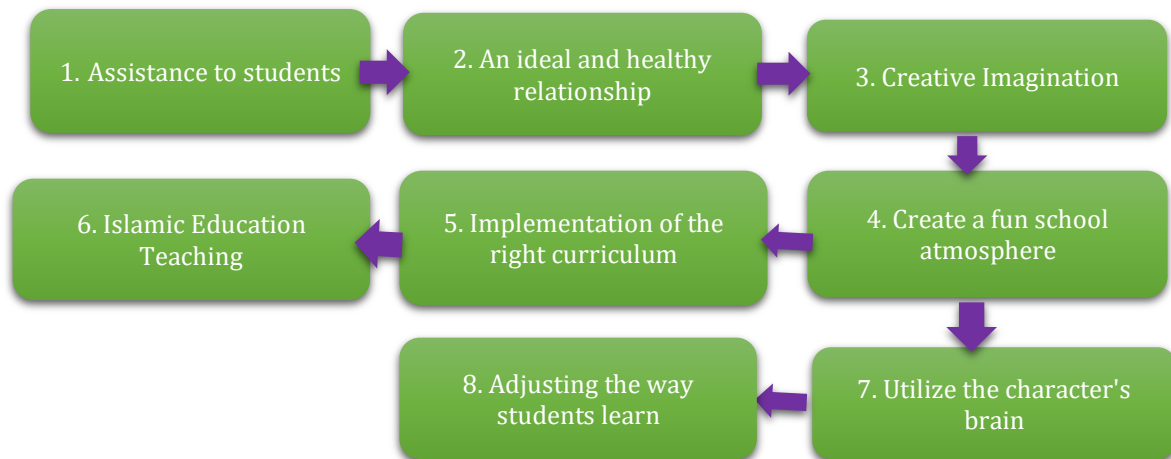


Figure 5. Flowchart of Neuroscience-Based Child-Friendly Implementation.

### Neuroscience-Based Child-Friendly Implementation Steps

1. Good assistance and approach to students
2. Relationships Teacher and student relationships are ideal and healthy
3. The implemented learning is creative and innovative
4. Create an atmosphere and model a pleasant school environment
5. Implementation of the right and correct curriculum
6. Directing students with an Islamic religious learning approach
7. Utilization of the character's brain for students
8. Focus on the brain approach and adjust the way students learn

### Child-Friendly School (SRA)

SRA is a school that pays serious attention to the psychological development of students and implements learning that pays attention to students' psychology and develops study habits according to students' natural conditions (Agustina, 2019; Hasibuan & Rahmawati, 2019). In this case, educational units have a significant responsibility to create a conducive learning environment and support a learning atmosphere that provides a sense of physical and psychological safety for students so that students feel an atmosphere without pressure and threats to gain a learning experience at school.

Regulation of the State Minister for Women's Empowerment and Child Protection Number 8 of 2014 concerning Child-Friendly School Policy article 1 explains that Child-Friendly Schools (SRA) are formal, non-formal, and informal education units that are safe, clean, and healthy, care and have a cultured environment, are capable of guarantee, fulfill, respect children's rights and protect children from violence, discrimination, and other

---

mistreatment and support children's participation, especially in planning, policy, learning, supervision and mechanisms, complaints related to the fulfillment of rights and protection of children in Education (Alfina & Anwar, 2020; Haryadi & Widodo, 2020).

The pattern of child-friendly based education is the implementation of education that treats children as students who have the right to express themselves, play, and have fun. An educational process that not only eliminates the practice of radicalism but also has serious attention to aspects of management policies that care about peace, tolerance, and mutual respect (Axelsson & Jakobson, 2020; Haq, 2020). SRA views that every individual child has the same rights to have comfort and safety, develop self-potential, determine and make life choices, communicate, be able to live in situations and dynamics that are constantly changing, face many challenges in life, and make a valuable contribution. Teachers also provide supportive and inclusive educational services to develop a learning environment based on humanistic values in schools (Aditoni & Rohmah, 2022).

Some research results show that when students feel happy and their goals relate to general well-being, it not only has an impact on increasing academic achievement but more than that has an impact on student welfare in adulthood (Mahfud, Astari, Kasdi, Mu'ammara, & Muyasaroh, 2020; Valentina, Marchira, Alfiatin, & Hadjam, 2021). Previous research has not developed an SRA model in the TOE (*Technology Organization Environment framework*) which identifies three aspects, namely the technological, organizational, and environmental contexts, which influence organizational processes in adopting, implementing, and using technological innovations so that in their research the SRA concept was developed based on *Framework technology organization environment*.

Based on the various opinions above, a child-friendly school is a school that provides a sense of security, pleases students, and respects students' rights, and the teacher becomes a figure who displays openness and friendliness towards students, guides and serves with full awareness and love and accepts and is tolerant of anyone with different needs.

### **Principles of Child-Friendly Schools**

The implementation of SRA is based on the following principles: a) non-discrimination, namely not discriminating between children's rights to obtain an education, regardless of gender, ethnicity, nation, religion, and parental background, b) the best interests of the child, namely paying attention to the interests of the child both in terms of taking actions and decisions in implementing education in schools, c) survival and development, namely creating a learning environment that is mutually respectful and guarantees the development of the holistic and integrated human potential of each child, d) respect for children's views, namely respect for children's rights, that every child has a way of thinking that is not the same so that it needs to be understood from different perspectives, and e) good management, namely openness and responsibility as well as involvement in the implementation of education. In addition, 6 (six) components serve as principles for the implementation of SRA, namely: a) SRA policies, b) child-friendly learning processes, c) educators and education staff trained in Child Rights and SRA, d)

---

SRA facilities and infrastructure, e) child participation, and f) participation of parents, community organizations, business world, *stakeholders*, and alumni (Suhid et al., 2010).

School policies must support the implementation of SRA and these policies are anti-violence toward students. This policy is inherent in every school program both in class and outside the classroom. All school programs are directed at realizing child-friendliness and making children feel comfortable and safe in learning. The teacher creates an atmosphere of a non-discriminatory conducive learning experience, an interactive and educative learning atmosphere that is supported by facilities and infrastructure, as well as attention and support from parents and the community.

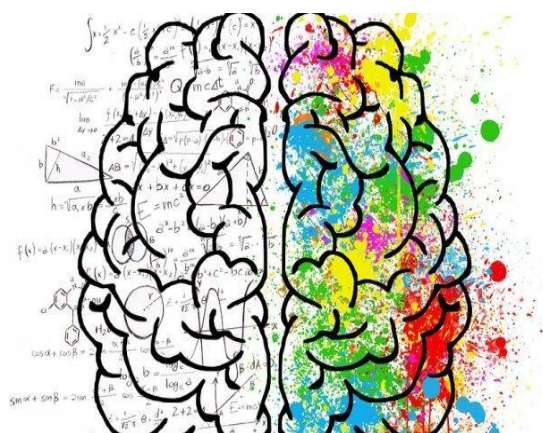
SRA must adhere to the principles of child protection, which include eliminating violence and discrimination against children's rights, and respecting children's opinions by integrating them into school policies. This includes both internal school policies and those involving external parties, all of which should be directed towards care and the best interests of the child (Aly & Thoyibi, 2020; Hamami & Nuryana, 2022).

### **Application of Child-Friendly Based on Neuroscience and Islamic Education**

Neuroscience is a novel educational system focused on understanding how nerves function, but educators often overlook it, risking a decline in the learning environment's vitality. Etymologically, neuroscience delves into the nervous system, particularly neurons, using a multidisciplinary approach. In simpler terms, it's a scientific study of the nervous system, including the brain and nerve functions (Suyadi, Nuryana, & Fauzi, 2020; Suyadi, Sumaryati, Hastuti, & Saputro, 2020).

From the literature, it's evident that neuroscience explores how the human brain and mind operate. As technology and science advance, its scope expands beyond health and medicine, becoming multidisciplinary, transdisciplinary, and interdisciplinary. This allows its integration with various conceptual approaches, including Islamic education. Abdullah (2020b) suggests that neuroscience and religious knowledge can be interconnected, a concept reflected in his work on the relationship between science and religion. The integration of neuroscience and Islamic education started around 2018 when Suyadi bridged the two for the advancement of Islamic religious education (Abdullah, 2020a, 2020b; Jailani, Suyadi, & Djubaedi, 2021; Jailani & Suyadi, 2022).

Derived from these theories, there's a concept of the "character brain" closely linked to child-friendly education in schools or Islamic boarding schools. This character brain aligns with previous brain classifications—the rational, emotional, social, and spiritual brains—within an educational context, creating a comprehensive understanding of character development.



---

Figure 6. Character brains as child-friendly education.

Based on the explanation of character brains in child-friendly education in schools, character education is neuroscience-based education, namely changing behavior scientifically through educative stimulation designs that have implications for permanent changes in the composition of the nervous system. The following are six brain circuitry systems that physiologically work hand in hand to regulate behavior so that they can become the basis for the neurobiology of character education (Shalihin, Suyadi, Yusmaliana, & Faturahman, 2021; Suyadi, Nuryana, & Fauzi, 2022).

The value of integrity character is the foundation of attitudes grounded in the effort to be someone who is always trustworthy in words, actions, and work. It involves a dedication to upholding human and moral values (moral integrity). Sub-values of integrity include honesty, love for truth, loyalty, moral commitment, determination, consistency, anti-corruption, justice, responsibility, leadership by example, and respecting individual dignity (especially for people with disabilities).

Instilling character education early is highly crucial, beginning within the family environment, which serves as the first platform for a child's character development. Early childhood is a critical phase for shaping a child's character, as it's during this period that they absorb what they see and hear. This influence significantly affects students' personalities and characters in their school life. According to Maksudin (2013), character education holds importance for several reasons, including: 1) character is an essential part of being human and should be taught; 2) the younger generation's character is facing erosion, fading, and weakening; 3) there's a degradation of values by resorting to any means necessary; and 4) character is a vital aspect of a person that determines the continuity and progress of a nation (Awhinarto, 2020; Santoso, 2017).

Strengthening character education can be seamlessly integrated through thematic learning within schools, aligning with the 2013 curriculum. This integration occurs through routine activities conducted within the school and by instilling character education seamlessly into everyday thematic learning. This approach is in line with Muslich's viewpoint (Yuliyanto, 2019; Yuliyanto & Indartono, 2020), asserting that character education can be integrated across all subjects. The objective of character education is to instill values within students, aiding their growth and betterment (Aziz, Abdullah, & Prasojo, 2020; Muhayati, 2021).

Through the reinforcement of character education, the aim is for students to independently enhance and apply their knowledge, assess, internalize, and personalize noble values and morals, thus manifesting them in their everyday behavior. As Kesuma, Halim, & Syam (2022) emphasize, the purpose of character education is to provide a



---

foundation for strengthening and cultivating specific values, which are evident in a child's demeanor both during and after their schooling. Strengthening and cultivation imply that education within a school setting goes beyond imparting values to children—it's a process that guides students to understand and reflect on how a value becomes relevant in their daily lives. Therefore, synergy among teachers, parents, and the community is crucial for the success and integration of the character education program, ensuring that a well-conceived program is sustained effectively.

The development of character and character education has become a necessity in education, as it aims not only to make students intelligent but also to cultivate polite behavior. This way, they contribute positively as members of society, benefiting both themselves and others. Character building is most effectively undertaken during a child's primary school years. This is why the government prioritizes character education in primary schools. This doesn't imply that other educational levels are neglected; it's a matter of differing emphasis (Haryadi & Widodo, 2020; Nuryana & Suyadi, 2019).

The five characters mentioned above serve as the foundation and preparation for students to navigate the dynamics of their future lives. Muslich (2011) emphasizes that character education is a crucial cornerstone of the nation and should be instilled in children from an early age. Similarly, Kurniawan, Asmara, & Hardivizon (2021) highlights the significance of early character education, particularly during the preschool years often referred to by psychologists as the 'golden age.' According to him, during this age, a child's ability to develop their potential is significantly influenced. This aligns with the government regulation No. 87 of 2017 concerning Character Education Strengthening (PPK), which positions character education as essential preparation for the 'golden generation' of 2045, equipping them with the spirit of Pancasila and strong character to face future changes (Solong, Munirah, & Arif, 2020; Widodo, 2018).

### **The Role of a PAI Teacher in Elementary Schools to Create Child-Friendly Schools**

Teachers are among the most critical elements in shaping students' moral education and hold the responsibility for character development and instilling legal norms to prevent juvenile delinquency. Particularly, Islamic Education teachers play a significant role in molding the character of Muslim teenagers. Additionally, they guide students in acquiring knowledge and its practical application in daily life, setting a positive example for their students. Character formation is a national educational objective, outlined in Article 1 of the 2003 National Education System Law, which aims to develop students' potential in intelligence, personality, and virtuous conduct (Bensaid, Machouche, & Tekke, 2021; Suyadi & Sutrisno, 2018a).

In schools like SD Giwangan and SD Ngupasan in Yogyakarta, Islamic Education teachers have a crucial role in character formation. These schools have implemented the Child-Friendly School program, endorsed directly by the Yogyakarta City Government as part of the Ministry of Women's Empowerment and Child Protection's initiatives. The Child-Friendly School program prioritizes children's well-being, encompassing their comfort, safety, and freedom of expression (Nurhayati, 2014; Rus'an, 2013).

---

A role implies an expected attitude that someone holding a significant position should possess, setting an example for others and contributing to improving the situation. In this research, the role referred to is that of a teacher who is expected to serve as a guiding figure in character development and formation among students. Teachers are educational professionals with competencies as instructors and facilitators, collaborating to achieve educational goals. Their tasks and responsibilities include guiding students towards good behavior, as emphasized in Quranic verse Ali Imran (3), verse 104.

وَالْتَكُنْ مِنْكُمْ أُمَّةٌ يَدْعُونَ إِلَى الْخَيْرِ وَيَأْمُرُونَ بِالْمَعْرُوفِ وَيَنْهَوْنَ عَنِ الْمُنْكَرِ وَأُولَئِكَ هُمُ الْمُفْلِحُونَ

An individual with character is someone who consistently strives to act positively towards Allah SWT, oneself, the environment, others, the nation, and the state. Character is formed through a learning process that takes place at home, school, and within the surrounding environment. Forming character in students requires consistent habits. According to Aristotle, virtuous living is not solely achieved through rational understanding (logic), but through habitus, the continuous practice of doing what is right. Habituation shapes one's way of life, making it easier to behave without excessive contemplation, distance, or the need to assign meaning every time an action is taken.

Therefore, as an initial step in education, habituation is an effective method of instilling moral values within a child's soul. These values, once ingrained, will manifest in their life as they progress into adolescence and adulthood. Character education is an essential aspect of improving human resources quality. Essentially, character education aims to shape a nation that is strong, competitive, morally upright, developing dynamically, and oriented toward knowledge and technology. Effective character education management is integrated within a school-based management (SBM) approach. School management must be adequately planned, executed, and controlled (Jailani, 2022; Nai'mah, Rahman, Ismail, & Sulaiman, 2020).

A Child-Friendly School can be defined as a conscious educational institution that ensures and guarantees children's rights in every aspect of life, planned and responsible. The concept of a Child-Friendly School is designed to create a safe, clean, healthy, caring, and environmentally conscious learning environment. It ensures the fulfillment of children's rights and protection from violence, discrimination, and other forms of mistreatment during their time in education. The program supports children's participation, particularly in planning, policies, learning, and supervision. A Child-Friendly School doesn't imply building new schools but rather conditioning existing ones to be child-friendly and ensuring the fulfillment and protection of children's rights, as schools become a second home for them (Mahfud, 2018; Mahfud, Amalia, Putra, & Tibet, 2021; Rahmawati, Yahji, Mahfud, Alfin, & Koiri, 2018).

The role of an Islamic Education teacher goes beyond providing religious materials; they embody religious values through daily practices. They consistently guide students to engage in good deeds and draw closer to Allah SWT. This guidance extends beyond the classroom. Since a teacher is a primary key to a school's success, especially in character formation, a teacher's demeanor plays a pivotal role. An Islamic Education teacher directly interacts with students, setting an example through their actions. In the context of Islamic

---

education, teachers are positioned as knowledgeable and exemplary, necessitating their righteous conduct as a manifestation of their knowledge. A teacher's manner in advising students relates to the students' reception of the advice. Balancing between firmness and gentleness is pivotal for students' acceptance of advice (Agustina, 2019; Hasibuan & Rahmawati, 2019).

The Islamic Education teacher becomes a role model for students both in speech and action, fostering an atmosphere of friendliness in learning and handling mistakes. Effective communication, two-way interaction, and positive language are vital. With a persuasive approach, Islamic Education teachers shape a school culture of camaraderie, eliminating bullying cases among students (Chanifah, Hanafi, Mahfud, & Samsudin, 2021; Mahfud, Astari, Kasdi, Mu'ammam, Muyasaroh, & Waidi, 2021). Students assume responsibility for themselves and others while respecting their elders. SD Ngupasan and Giwangan Yogyakarta emphasize five clusters of fulfilling children's rights during their school years, including participation in activities, healthcare, nurturing and instilling noble values, access to education, and specific protection while in school (Alfina & Anwar, 2020).

An Islamic Education teacher doesn't merely impart knowledge but also conveys moral values, educates students in noble conduct, and exemplifies a virtuous personality. Thus, teachers should fulfill their role with sincerity and selflessness, prioritizing the well-being of students over personal gain (Hefni, 2022).

Islamic Education teachers should resemble parents in school, maintaining an open and attentive attitude to foster communication and a positive relationship between students and teachers. The entire school community should understand the Child-Friendly School program, ensuring its effective implementation and providing appropriate understanding to parents to create a supportive learning environment across school, family, and surroundings. Evaluating the program should involve all stakeholders: students, parents, school committees, staff, and teachers. Results of the evaluation should be executed better and continuously (Agustina, 2019).

## **CONCLUSION**

SD Negeri Giwangan and SD Negeri Ngupasan are implementing child-friendly school initiatives according to the Mayor of Yogyakarta's Decree Number 434 of 2016. These schools are focusing on six key child-friendly school indicators, which include: 1) SRA Policy, 2) Curriculum implementation, 3) Training educators and staff in children's rights, 4) Developing SRA facilities and infrastructure, 5) Encouraging child participation, and 6) Promoting parent involvement. By incorporating neuroscience principles, students are aided in maintaining focus and exhibiting positive behavior. Simultaneously, guidance based on Islamic education contributes to shaping students' character and morality. The collaboration of neuroscience and Islamic education yields positive outcomes, fostering an environment that deters bullying and juvenile misconduct.

The research, however, acknowledges limitations and shortcomings in its content. Thus, the researcher suggests that the government, practitioners, academics, teachers, and the community collectively explore and implement a child-friendly model informed by the

---

Islamic education curriculum. Additionally, they should consider child-friendly development through the lens of Bloom's taxonomic concepts and Avicenna's layered perception. This research holds the potential to influence the foundation of child-friendly education and the creation of joyful learning environments.

Further research should delve deeper into how neuroscience and Islamic education are integrated to create child-friendly educational environments in elementary schools in Yogyakarta. This research could focus on directly assessing how this integration impacts students' overall development, encompassing academic achievement, emotional well-being, and social behavior. Additionally, it is crucial to investigate the perceptions and experiences of teachers, students, and parents regarding this approach and the challenges encountered during its implementation. Future studies could also expand their scope to compare various models of Child-Friendly Schools across different schools or regions with diverse social and cultural contexts. This comparative approach would provide a more comprehensive understanding of the factors that contribute to the success of such programs.

## REFERENCES

- Abdullah, M. A. (2020a). Mendialogkan Nalar Agama dan Sains Modern di Tengah Pandemi Covid-19. *Maarif*, 15(1), 11–39. <https://doi.org/10.47651/mrf.v15i1.75>.
- Abdullah, M. A. (2020b). The Intersubjective Type of Religiosity Theoretical Framework and Methodological Construction for Developing Human Sciences in a Progressive Muslim Perspective. *Al-Jami'ah: Journal of Islamic Studies*, 58(1), 63–102. <https://doi.org/10.14421/ajis.2020.581.63-102>.
- Aditoni, A., & Rohmah, Z. (2022). Campus-Based Millennials' Learning Preferences Toward Da'Wah in Urban City of Surabaya. *Journal of Indonesian Islam*, 16(1), 27–48. <https://doi.org/10.15642/JIIS.2022.16.1.27-48>.
- Agustina, N. E. (2019). Implementasi Program Sekolah Berbasis Ramah Anak untuk Meningkatkan Nilai Panca Karakter Siswa. *Jurnal Kajian Teori Dan Praktik Kependidikan*, 4(2), 80. <http://dx.doi.org/10.17977/um027v4i22019p079>.
- Akmaliyah, Hudzaifah, Y., Ulfah, N., & Pamungkas, M. I. (2021). Child-friendly Teaching Approach for Arabic Language in Indonesian Islamic Boarding School. *International Journal of Language Education*, 5(1), 501–514. <https://doi.org/10.26858/IJOLE.V5I1.15297>.
- Al-Ghazali, I. (2003). *Raudhah Ihya Ulumuddin*. Semarang: Asy-Syifa.
- Albantani, A. M., & Madkur, A. (2017). Musyahadat Al Fidyu: Youtube-Based Teaching and Learning of Arabic as Foreign Language (AFL). *Dinamika Ilmu*, 17(2), 291–308. <https://doi.org/10.21093/di.v17i2.854>.
- Alfina, A., & Anwar, R. N. (2020). Manajemen Sekolah Ramah Anak PAUD Inklusi. *AL-TANZIM: Jurnal Manajemen Pendidikan Islam*, 4(1), 36–47. <https://doi.org/10.33650/al-tanzim.v4i1.975>.
- Alvesson, M. (2019). Leadership: Convergence and Divergence in Leadership Relations. *Journal of Management Inquiry*, 28(3), 319–334. <https://doi.org/10.1177/1056492617717339>.

- 
- Aly, A., & Thoyibi, M. (2020). Violence in Online Media and its Implication to Islamic Education of Indonesia. *Indonesian Journal of Islam and Muslim Societies*, 10(1), 177–198. <https://doi.org/10.18326/ijims.v10i1.177-198>.
- Andrews, Walter, & Ayse Dalyan. (2020). Poetry, Culture, Neuroscience, Emotions, and the Case of Bonding, Separation, and Separation Anxiety in Sixteenth-Century Ottoman Culture: A Theoretical Preface. *Journal of the Ottoman and Turkish Studies Association*, 7(2), 147–174. <https://doi.org/10.2979/jottturstuass.7.2.10>.
- Aw, V. K. J., & Ayoko, O. B. (2017). The Impact of Followers' Conflict Behaviors on Teams' Transformational Leadership, Team Member Exchange and Engagement. *International Journal of Conflict Management*, 28(4), 509–532. <https://doi.org/10.1108/IJCMA-04-2016-0020>.
- Awhinarto, S. (2020). Otak Karakter dalam Pendidikan Islam: Analisis Kritis Pendidikan Karakter Islam Berbasis Neurosains. *Jurnal Pendidikan Karakter*, 10(1), 143–156. <https://doi.org/10.21831/jpk.v10i1.29693>.
- Axelsson, M., & Jakobson, B. (2020). Negotiating Science - Building Thematic Patterns of the scientific Concept Sound in a Swedish Multilingual Lower Secondary Classroom. *Language and Education*, 34(4), 291–310. <https://doi.org/10.1080/09500782.2020.1740730>
- Aziz, E., Abdullah, I., & Prasojo, Z. H. (2020). Why are Women Subordinated? The Misrepresentation of the Qur'an in Indonesian Discourse and Practice. *Journal of International Women's Studies*, 21(6), 235–248. <https://vc.bridgew.edu/jiws/vol21/iss6/14/>.
- Bahrudin, U., Halomoan, & Sahid, M. M. (2020). Implementation of HOTS in Debate Strategy to Improve the Ability of Speaking Arabic Among Students. *Solid State Technology*, 63(4), 816–826. <https://solidstatetechnology.us/index.php/JSST/article/view/1322>.
- Bensaid, B., Machouche, S. B. T., & Tekke, M. (2021). An Islamic Spiritual Alternative to Addiction Treatment and Recovery. *Al-Jami'ah*, 69(1), 127–162. <https://doi.org/10.14421/ajis.2021.591.127-162>.
- Chanifah, N., Hanafi, Y., Mahfud, C., & Samsudin, A. (2021). Designing a Spirituality-Based Islamic Education Framework for Young Muslim Generations: A Case Study from Two Indonesian Universities. *Higher Education Pedagogies*, 6(1), 195–211. <https://doi.org/10.1080/23752696.2021.1960879>.
- Diana, R. R., Chirzin, M., Bashori, K., Suud, F. M., & Khairunnisa, N. Z. (2021). Parental Engagement on Children Character Education: The Influences of Positive Parenting and Agreeableness Mediated by Religiosity. *Cakrawala Pendidikan*, 40(2), 428–444. <https://doi.org/10.21831/cp.v40i2.39477>.
- Farida, U., & Kasdi, A. (2021). Women's Roles in Ihyā' 'Ulūm Al-Dīn and Method of Teaching it at pesantrens in Indonesia. *Al-Jami'ah*, 59(1), 163–190. <https://doi.org/10.14421/ajis.2021.591.163-190>.
- Farkhani, Baidhaw, Z., & Kuswaya, A. (2021). Islamophobia in Spain: Inheritance of Reconquista and Hate Political Rhetoric. *Journal of Al-Tamaddun*, 16(1), 65–79. <https://doi.org/10.22452/JAT.vol16no1.5>.
- Fegter, S., & Kost, M. (2023). Visibility and Well-Being in School Environments: Children's Reflections on the "New Normal" of Teaching and Learning During the Covid-19 Pandemic. *International Journal on Child Maltreatment: Research, Policy and Practice*, 6(9), 1–15. <https://doi.org/10.1007/s42448-022-00136-7>.
-

- 
- Fritz, I., & Baggio, G. (2021). Neural and Behavioural Effects of Typicality, Denotation and Composition in an Adjective – Noun Combination Task. *Language, Cognition and Neuroscience*, 1(6), 1–23. <https://doi.org/10.1080/23273798.2021.2004176>.
- Hamami, T., & Nuryana, Z. (2022). A holistic – integrative Approach of the Muhammadiyah Education System in Indonesia. *HTS Teologiese Studies / Theological Studies*, 1(1), 1–10. <https://hts.org.za/index.php/hts/article/view/7607/23727>.
- Haq, T. Z. (2020). Pola Asuh Orang Tua dalam Perilaku Sosial Generasi Millennial Ditinjau dari Neurosains. *Al-Mada: Jurnal Agama, Sosial, dan Budaya*, 3(1), 88–108. <https://doi.org/10.31538/almada.v3i1.609>.
- Haryadi, D., & Widodo, H. (2020). Pengembangan Kurikulum Berbasis Adiwiyata untuk Meningkatkan Kemampuan Practical Life. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 5(2), 195–210. <https://doi.org/10.31538/ndh.v5i2.558>.
- Hasibuan, A. T., & Rahmawati. (2019). Sekolah Ramah Anak Era Revolusi Industri 4.0 di SD Muhammadiyah Pajangan 2 Berbah Yogyakarta. *AL-BIDAYAH: Jurnal Pendidikan Dasar Islam*, 11(01). <https://doi.org/10.14421/al-bidayah.v11i01.180>.
- Hefni, W. (2022). Pengarusutamaan Moderasi Beragama Generasi Milenial melalui Gerakan Siswa Moderat di Kabupaten Lumajang. *Jurnal SMART (Studi Masyarakat, Religi, Dan Tradisi)*, 08(2), 163–175. <https://doi.org/10.18784/smart.v8i2.1763>.
- Jailani, M. (2022). Development of Arabic Learning Media Innovation from Neuroscience Perspective for Santri: Implications in the Development of Intellectual Property Rights in Islamic Boarding Schools. *AL-TA'LIM JOURNAL Faculty of Islamic Education and Teacher Training UIN Imam Bonjol Padang*, 29(2), 150–163. <https://doi.org/10.15548/jt.v29i2.734>.
- Jailani, M., & Suyadi. (2022). The Impact of Neuroscience-Based Modern Islamic Education on the Aspect of Creative Imagination and Development of Religious Moderation on Madura Island. *Islam Transformatif*, 6(2), 157–172. <https://doi.org/10.30983/it.v6i2.5793>.
- Jailani, M., Suyadi, & Djubaedi, D. (2021). Menelusuri Jejak Otak dan 'Aql dalam Al-Qur'an Perspektif Neurosains dan Pendidikan Islam di Era Pandemi COVID-19. *Tadris: Jurnal Pendidikan Islam*, 16(1), 1–19. <https://doi.org/10.19105/tjpi.v16i1.4347>.
- Jones, P., & Ratten, V. (2021). Knowledge Spillovers and Entrepreneurial Ecosystems. *Knowledge Management Research and Practice*, 19(1), 1–7. <https://doi.org/10.1080/14778238.2020.1801363>.
- KemenPPA. (2024). *Sistem Informasi Online Perlindungan Perempuan dan Anak*.
- Kesuma, A. S., Halim, A., & Syam, N. (2022). The Religious Politics of Habaib in Surabaya and Bangil East Java: A Socio-Religio-Political Approach. *Qudus International Journal of Islamic Studies*, 10(2), 285–318. <https://doi.org/10.21043/qijis.v10i2.12090>.
- Kurniawan, R., Asmara, M., & Hardivizon, H. (2021). Arabic Language and the Concept of I'jaz al-Qur'an (Critics to Louwis 'Awad's thoughts/Bahasa Arab dan Konsep I'jaz al-Qur'an (Kritik Pemikiran Louwis 'Awad). *Arabiyatuna : Jurnal Bahasa Arab*, 5(1), 161. <https://doi.org/10.29240/jba.v5i1.2622>.
- Mahfud, Chirul. (2018). Chinese Muslim Community Development in Contemporary Indonesia: Experiences of PITI in East Java. *Studia Islamika Indonesian Journal for Islamic Studies*, 25(3), 474–498. <https://doi.org/10.15408/sdi.v25i3.6755>.
-

- 
- Mahfud, Choirul, Amalia, R., Putra, D., Tibet, N., Muqorobin, H., Zabihullah, F., & Khoirunnisa, D. (2021). Pengaruh Agama terhadap Kebahagiaan Generasi Milenial di Indonesia dan Singapura. *Jurnal Islam Nusantara*, 4(2), 144–159. <https://doi.org/10.33852/jurnalin.v4i2.221>.
- Mahfud, Choirul, Astari, R., Kasdi, A., Mu'ammam, M. A., Mulyasaroh, M., & Waidi, F. (2021). Islamic Cultural and Arabic linguistic Influence on the Languages of Nusantara; From Lexical Borrowing to Localized Islamic Lifestyles. *Wacana*, 22(1), 224–248. <https://scholarhub.ui.ac.id/wacana/vol22/iss1/11/>.
- Maksudin. (2013). *Pendidikan Karakter Non-Dikotomik*. Yogyakarta: Pustaka Pelajar.
- Mohammad Jailani. (2022). Pembelajaran Bahasa Arab Berbasis Kurikulum Merdeka di Pondok Pesantren. *Jurnal Praktik Baik Pembelajaran Sekolah dan Pesantren*, 1(01), 7–14. <https://doi.org/10.56741/pbpsp.v1i01.10>.
- Muchsin, B. (2010). *Pendidikan Islam Humanistik: Alternatif Pendidikan Pembebasan Anak*. Bandung: Refika Aditama.
- Muhayati, S. (2021). Integrasi Materi Pendidikan Agama Islam dan Pendidikan Pancasila dan Kewarganegaraan dalam Menangkal Radikalisme. *Syntax Idea*, 14(1), 1–13.
- Muslich, M. (2011). *Pendidikan Karakter: Menjawab Tantangan Krisis Multidimensional*. Jakarta: PT Bumi Aksara.
- Nai'mah, Rahman, A., Ismail, Z., Sulaiman, H. B., & Kalupae, A. (2020). Entrepreneurship Empowerment Strategy in Islamic Boarding Schools : Lesson from Indonesia. *Jurnal Pendidikan Islam*, 09(June), 235–262. <https://doi.org/10.14421/jpi.2020.92.235-262>.
- Nurhayati, N. (2014). Motivasi Belajar Pendidikan Agama Islam di SMA Negeri 1 Belawa Kab. Wajo (Perspektif Teori ARCS). *Lentera Pendidikan : Jurnal Ilmu Tarbiyah Dan Keguruan*, 17(2), 272–280. <https://doi.org/10.24252/lp.2014v17n2a9>.
- Nuryana, Z., & Suyadi, S. (2019). Character Development Based on Hidden Curriculum at the Disaster-prone School. *Journal of Education and Learning (EduLearn)*, 13(2), 219–225. <https://doi.org/10.11591/edulearn.v13i2.10058>.
- Olweus, D. (1993). *Bullying at School: What We Know and What We Can Do*. Blackwell Publishing.
- Pabbajah, M., Abdullah, I., Widyanti, R. N., Jubba, H., & Alim, N. (2020). Student Demoralization in Education: The Industrialization of University Curriculum in 4.0.Era Indonesia. *Cogent Education*, 7(1), 0–14. <https://doi.org/10.1080/2331186X.2020.1779506>.
- Pertiwi, P., Llewellyn, G., & Villeneuve, M. (2020). Disability Representation in Indonesian Disaster Risk Reduction Regulatory Frameworks. *International Journal of Disaster Risk Reduction*, 45, 101454. <https://doi.org/10.1016/j.ijdrr.2019.101454>.
- Rahman, A., & Subiyantoro, S. (2021). the Leadership Role of School Principals in Online Learning During the Covid-19 Pandemic. *AL-TANZIM: Jurnal Manajemen Pendidikan Islam*, 5(1), 165–175. <https://doi.org/10.33650/al-tanzim.v5i1.1805>.
- Rahmawati, Yahiji, K., Mahfud, C., Alfin, J., & Koiri, M. (2018). Chinese Ways of Being Good Muslim: From the Cheng Hoo Mosque to Islamic education and Media Literacy. *Indonesian Journal of Islam and Muslim Societies*, 8(2), 225–252. <https://doi.org/10.18326/ijims.v8i2.225-252>.
- Ritonga, M., Hakim, R., Nurdianto, T., & Ritonga, A. W. (2023). Learning for Early Childhood Using the I Can do Platform: Breakthroughs for Golden age Education in Arabic
-



- 
- Learning. *Education and Information Technologies*, 0123456789. <https://doi.org/10.1007/s10639-022-11575-7>.
- Rus'an, R. (2013). Spiritual Quotient (Sq): The Ultimate Intelligence. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah dan Keguruan*, 16(1), 91–100. <https://doi.org/10.24252/lp.2013v16n1a8>.
- Santoso, M. A. F. (2017). The rights of the child in Islam: Their Consequences for the Roles of State and Civil Society to Develop Child Friendly Education. *Indonesian Journal of Islam and Muslim Societies*, 7(1), 101–124. <https://doi.org/10.18326/ijims.v7i1.101-124>.
- Shalihin, R. R., Suyadi, Yusmaliana, D., & Faturahman, D. (2021). Rational Brain Transmutation Into Intuitive Brain Based on Neuroscience in Islamic Education. *Rational Brain Transmutation Into Intuitive Brain Based on Neuroscience in Islamic Education*, 1–10. <https://doi.org/10.4108/eai.14-9-2020.2305691>.
- Solong, N. P., Munirah, M., & Arif, M. (2020). Effective School Management at MAN Insan Cendekia Gorontalo. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah dan Keguruan*, 23(1). <https://doi.org/10.24252/lp.2020v23n1i3>.
- Solong, Najamuddin Petta, Munirah, M., & Arif, M. (2020). Effective School Management at MAN Insan Cendekia Gorontalo. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah dan Keguruan*, 23(1), 22. <https://doi.org/10.24252/lp.2020v23n1i3>.
- Suhid, A. B. T. E., Warren, R., McKEACHiE, W., Pendidikan, D., Razak, P., Pelajaran, O., Talib, L. R., Pelajaran, A., Kabinet, J., Jawatankuasa, L., Pendidikan, S., Melayu, T., Pendidikan, K. K., Kabinet, L. J., Feiman-nemser, S., Othman, H., Salleh, B. M. B. M., Dawilah, S. M., Sulaiman, A., ... 2006-2010, P. I. P. P. (2010). Malaysian Teacher Quality for Human Capital Development. *Australian Journal of Teacher Education*.
- Suyadi. (2020). *Pendidikan Islam dan Neurosains: Menelusuri Jejak Akal dan Otak dalam Alquran Hingga Pengembangan Neurosains dalam Pendidikan Islam*. Jakarta: Kencana.
- Suyadi, Asmorojati, A. W., Yudhana, A., Nuryana, Z., & Siraj, S. B. (2022). COVID-19 Ambassadors: Recognizing Kampus Mengajar at the Merdeka Belajar Kampus Merdeka Program Humanitarian Projects in the Tertiary Education Curriculum. *Frontiers in Education*, 1–13. <https://doi.org/10.3389/educ.2022.902343>.
- Suyadi, Nuryana, Z., & Fauzi, N. A. F. (2020). The Fiqh of Disaster: The Mitigation of Covid-19 in the Perspective of Islamic Education-neuroscience. *International Journal of Disaster Risk Reduction*, 51, 101848. <https://doi.org/10.1016/j.ijdr.2020.101848>.
- Suyadi, Nuryana, Z., Sutrisno, & Baidi. (2022). Academic Reform and Sustainability of Islamic Higher Education in Indonesia. *International Journal of Educational Development*, 89, 102534. <https://doi.org/10.1016/j.ijedudev.2021.102534>.
- Suyadi, Sumaryati, Hastuti, D., & Saputro, A. D. (2020). Early Childhood Education Teachers' Perception of the Integration of Anti-corruption Education into Islamic Religious Education in bawean Island Indonesia. *Elementary Education Online*, 19(3), 1703–1714. <https://doi.org/10.17051/ilkonline.2020.734838>.
- Suyadi, & Sutrisno. (2018a). A Genealogical Study of Islamic Education Science at the Faculty of Ilmu Tarbiyah dan Keguruan UIN Sunan Kalijaga. *Al-Jami'ah*, 56(1), 29–58. <https://doi.org/10.14421/ajis.2018.561.29-58>.
- Suyadi, & Sutrisno. (2018b). A Genealogical Study of Islamic Education Science at The Faculty of Ilmu Tarbiyah dan Keguruan UIN Sunan Kalijaga. *Al-Jami'ah: Journal of Islamic Studies*, 56(1), 28–95.
-

- 
- Suyadi, & Widodo, H. (2019). Millennialization of Islamic Education Based on Neuroscience in the Third Generation University in Yogyakarta Indonesia. *QIJIS: Qudus International Journal of Islamic Studies*, 7(1), 173–202. <https://doi.org/DOI:10.21043/qijis.v7i1.4922>.
- Thambu, N., Prayitno, H. J., & Zakaria, G. A. N. (2021). Incorporating Active Learning into Moral Education to Develop Multiple Intelligences: A Qualitative Approach. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 3(1), 17–29. <https://doi.org/10.23917/ijolae.v3i1.10064>.
- Valentina, T. D., Marchira, C. R., Afiatin, T., & Hadjam, N. R. (2021). Making Meaning of Religious Values in Preventing a Fatal Suicide Act of a Bisexual Youth with Borderline Personality Disorder: A Qualitative Study. *Jurnal Psikologi*, 48(1), 80. <https://doi.org/10.22146/jpsi.56713>.
- Vira, E. G., & Skoog, T. (2021). Swedish Middle School Students' Psychosocial Well-being During the COVID-19 Pandemic: A Longitudinal Study. *SSM - Population Health*, 16(August), 100942. <https://doi.org/10.1016/j.ssmph.2021.100942>.
- Wargadinata, W. W. (2020). Mediated Arabic Language Learning for Arabic Students of Higher Education in COVID-19 Situation. *Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature*, 3(1), 59–78. <https://doi.org/10.22219/jiz.v3i1.11862>.
- Widodo, H. (2018). Pengembangan Respect Education Melalui Pendidikan Humanis Religius di Sekolah. *Lentera Pendidikan: Jurnal Ilmu Tarbiyah dan Keguruan*, 21(1), 110–122. <https://doi.org/10.24252/lp.2018v21n1i10>.
- Yuliyanto, A. (2019). *Strategy For Strengthening Character Education in Muhammadiyah Boarding School Yogyakarta*. 323(ICoSSCE 2018), 164–170. <https://doi.org/10.2991/icossce-icsmc-18.2019.32>.
- Yuliyanto, A., & Indartono, S. (2020). The Role of Teachers in Strengthening Character Education to Prepare Students to Enter the Age of Disruption and Abundance Technology. *Advances in Social Science, Education and Humanities Research*, 398(ICoSSCE 2019), 142–146. <https://doi.org/10.2991/assehr.k.200130.030>.